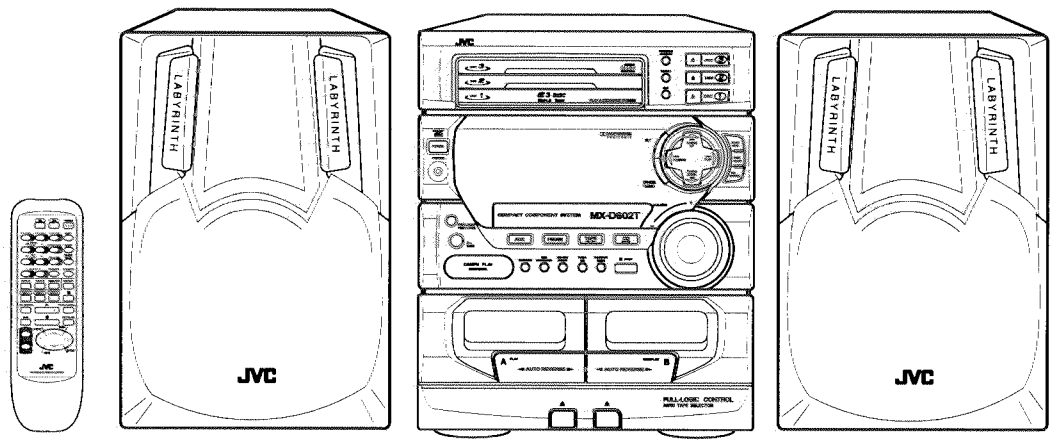
JVC

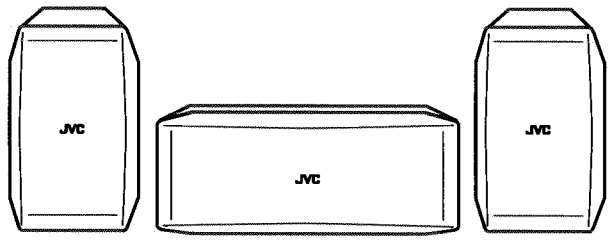
SERVICE MANUAL

COMPACT COMPONENT SYSTEM

MX-D602T



SP-D602 CA-D602T SP-D602



(SP-DSS90) (SP-DSC90) (SP-DSS90)

SP-DS90

COMPACT disc DIGITAL AUDIO

Area Suffix

C ---------- Canada
J ---------- U.S.A.

Cassette Mechanism NEXT-W2M
CD Traverse Mechanism V3-2
Optical Pickup OPTIMA-150S
CD Signal Processor MN35510

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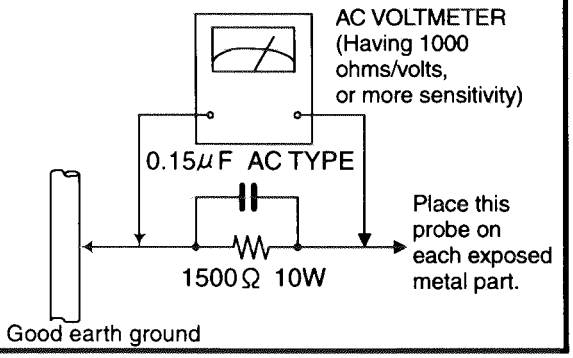
No.20689
Jul. 1998

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet , particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to eachexposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

Important for Laser Products

1.**CLASS 1 LASER PRODUCT**
2.**DANGER :** Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.
3.**CAUTION :** There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4.**CAUTION :** The compact disc player uses invisible laserradiation and is equipped with safety switches whichprevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.
5.**CAUTION :** If safety switches malfunction, the laser is able to function.
6.**CAUTION :** Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ ***CAUTION*** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

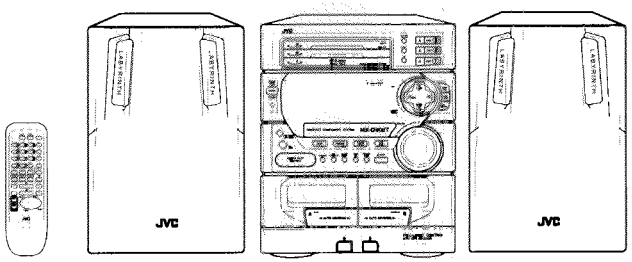
JVC

COMPACT COMPONENT SYSTEM

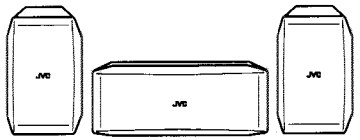
MX-D602T

Consists of CA-D602T, SP-D602 and SP-DS90.

COMPACT disc DIGITAL AUDIO



SP-D602 CA-D602T SP-D602



(SP-DSS90) (SP-DSC90) (SP-DSS90)

SP-DS90

INSTRUCTIONS

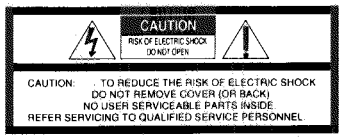
For Customer Use:
Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. .....

Serial No. .....

GVT0004-001A
[J]

Warnings, Cautions and Others


CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For Canada/pour le Canada

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQUAU FOND

Caution — POWER switch!
Disconnect the mains plug to shut the power off completely. The POWER switch in any position does not disconnect the mains line. The power can be remote controlled.

IMPORTANT FOR LASER PRODUCTS

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.

CAUTION

To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

Thank you for purchasing the JVC Compact Component System.
We hope it will be a valued addition to your home, giving you years of enjoyment.
Be sure to read this instruction manual carefully before operating your new stereo system.
Here you will find all the information you need to set up and use the system.
For questions that are not be answered in the manual, contact your dealer.

Features

Here are some of the things that make your System powerful and easy to use.

Easy operation

COMPU PLAY

■ The controls and operations have been designed to make them very easy to use, so you can spend your time listening to music.
- With the One Touch Operation feature of JVC's **COMPU PLAY** you can turn on the System and start the radio, the Cassette Deck, or the CD Player with a single touch.

Great sound

■ To get such great sound from such a compact package the System has:
- Built-in **Dolby Pro Logic** and **Dolby 3ch Logic** effects. Combined with the optional center and rear speakers, this allows you to enjoy the dynamic, pulsating sound effects of a cinema.
- Programed sound mode includes five surround effects **D. CLUB, HALL,** and **STADIUM**. It also includes S.E.A (Sound Effect Amplifier) effects **ROCK, POP,** and **CLASSIC**. You can also register up to three customized settings (MANUAL 1 to 3).

Triple Tray

■ CD changer function can operate 3 discs.
- Discs can be changed during play using the **TRIPLE TRAY**.
- Continuous, random or program play of 3 discs.

Three timers

■ The three timers, **Daily Timer, Recording Timer,** and **Sleep Timer** are extremely easy to set.

How This Manual Is Organized

In this manual we have incorporated some special features:
- Basic information that is the same for many different functions is grouped in one place, and not repeated in each procedure. For instance, in the section on playing a CD, we do not repeat the information about setting the volume and the sound conditions, which are discussed in the Common Operations section.
- Name of buttons and controls are written in all capital letters like this: SOUND MODE.

The manual has a table of contents to help you quickly look up what you want to know.
We've enjoyed making this manual for you, and hope you will use it to enjoy the sound and many features built into your System.

IMPORTANT CAUTIONS

1. Installation of the Unit
- Select a place which is level, dry and neither too hot nor too cold. (Between 5°C and 35°C or 41°F and 95°F.)
- Leave sufficient distance between the Unit and a TV.
- Do not use the Unit in a place subject to vibrations.

2. Power cord
- Do not handle the power cord with wet hands!
- Some power (16 watts) is always consumed as long as the power cord is connected to the wall outlet.
- When unplugging the Unit from the wall outlet, always pull the plug, not the power cord.

3. Malfunctions, etc.
- There are no user-serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the Unit.

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Getting Started

Accessories

Check that you have all of the following items, which are supplied with the System.

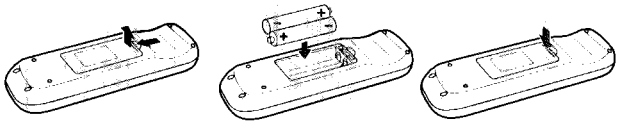
AM Loop Antenna (1)
Remote Control (1)
Batteries (2)
FM Wire Antenna (1)

If any of these items is missing, contact your dealer immediately.

How to Put Batteries in the Remote Control

Match the polarity (+ and −) on the batteries with the + and − markings in the battery compartment.

R6P (SUM-3)/AA (15F)

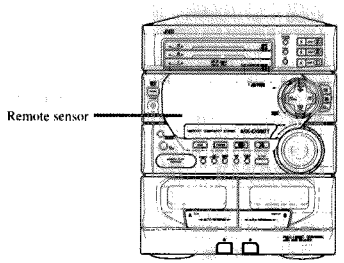


CAUTION: Handle batteries properly.
To avoid battery leakage or explosion:

- Remove batteries when the Remote Control will not be used for a long time.
- When you need to replace the batteries, replace both batteries at the same time with new ones.
- Do not use an old battery with a new one.
- Do not use different types of batteries together.

Using the Remote Control

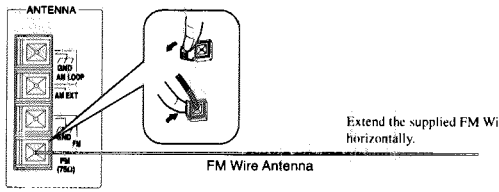
The Remote Control makes it easy to use many of the functions of the System from a distance of up to 7m (23 feet) away.
You need to point the Remote Control at the remote sensor on the System's front panel.



CAUTION: Make all connections before plugging the Unit into an AC power outlet.

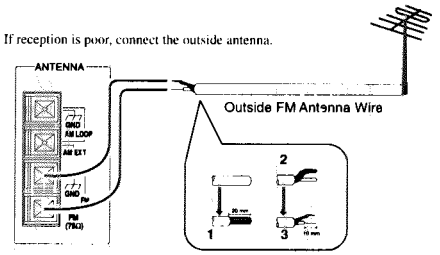
Connecting the FM Antenna

Using the Supplied Wire Antenna



Using an FM 75-Ohm Antenna Cable (not supplied)

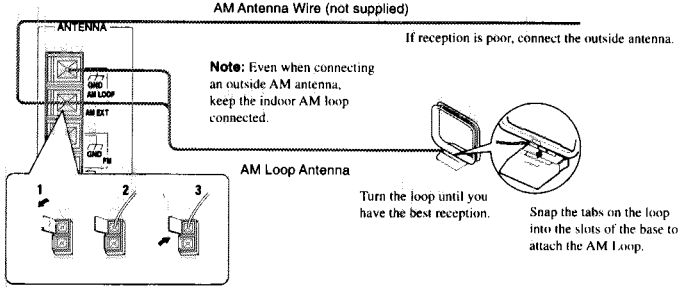
If reception is poor, connect the outside antenna.



Before attaching a 75-ohm coaxial lead (the kind with a round wire going to an outside antenna), disconnect the supplied FM Wire Antenna.

CAUTION: To avoid noise, keep antennas away from metallic parts of the System, connecting cord and the AC power cord.

Connecting the AM Antenna

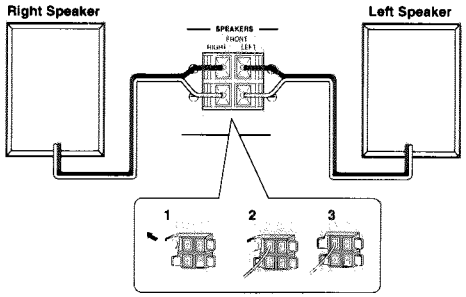

AM Antenna Wire (not supplied)
If reception is poor, connect the outside antenna.
ANTENNA
GND
AM LOOP
AM EXT
GND
FM
Note: Even when connecting an outside AM antenna, keep the indoor AM loop connected.
AM Loop Antenna
1
2
3
Turn the loop until you have the best reception.
Snap the tabs on the loop into the slots of the base to attach the AM Loop.

CAUTION: Make all connections before plugging the Unit into an AC power outlet.

Connecting the Speakers

For each speaker, connect one end of the speaker wire to the speaker terminals on the back of the System.

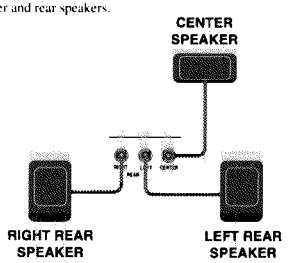
1. Open each of the terminals and insert the speaker wires firmly, then close the terminals.
2. Connect the red (+) and black (–) terminals of the right side speaker to the red (+) and black (–) terminals marked RIGHT on the System.
   Connect the red (+) and black (–) terminals of the left side speaker to the red (+) and black (–) terminals marked LEFT on the System.



IMPORTANT: Use speakers with the correct impedance only. The correct impedance is indicated on the back panel.
CAUTION: If a TV is installed near the speakers, the TV may display irregular colors. In this case, set the speakers away from the TV.

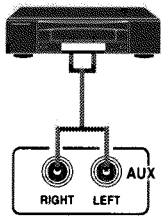
Connecting the Center Speaker and Rear Speakers

Connect the center speaker and rear speakers.



Connecting Auxiliary Equipment

VCR or other equipment
To listen to this source, press AUX.



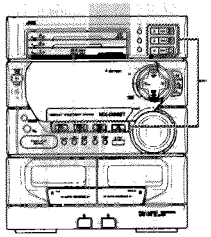
Now you can plug the AC power cord into the wall outlet, and your System is at your command!

COMPU PLAY

COMPU PLAY is JVC's feature that lets you control the most frequently used functions of the System with a single touch.
One Touch Operation starts playing a CD, turns on the radio, plays a tape, etc. with a single press of the play button for that function. What One Touch Operation does for you is to turn the power on, then start the function you have specified. If the Unit is not ready, such as no CD or tape in place, the Unit still powers on so you can insert a CD or tape.
How One Touch Operation works in each case is explained in the section dealing with that function.
The COMPU PLAY buttons are:

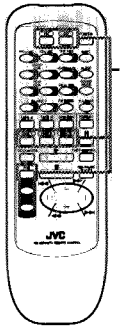
On the Unit

- CD Player DISC 1 to DISC 3 buttons
- CD Player ▲ (Open/Close) buttons
- CD ►/II button
- TAPE ◄■ ►■ button
- FM/AM button
- AUX button

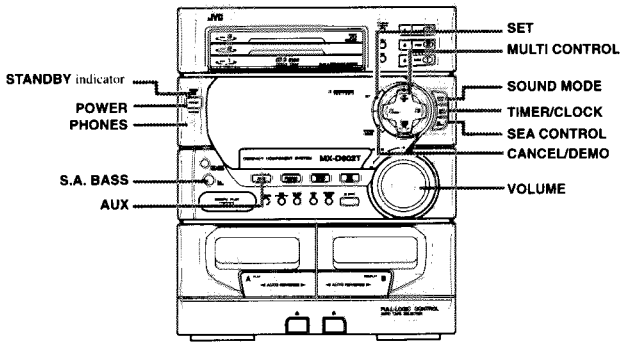


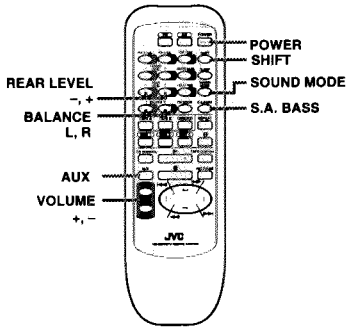
On the Remote Control

- FM button
- AM button
- DISC 1 to DISC 3 buttons
- AUX button

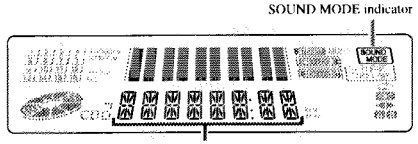


Common Operations





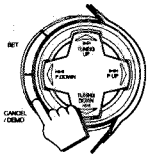
Display



Source, Sound Mode Volume level etc.

When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

Demo Mode



When the System is connected to an AC power outlet, a Demo automatically starts showing some of the system's features.
The Demo display cycles through the following items repeatedly.

- Scrolling display of "DEMO MODE START".
- Demo of PRO LOGIC and 3CH LOGIC.
- Demo of Sound Modes.
- Demo of S.A. BASS.
- Demo of continuous play from DISC 1 to DISC 3.

To turn the Demo off, press any of the operation buttons. "DEMO OFF" appears on the display and the Demo automatically stops.

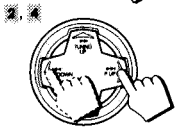
To turn the Demo on, press CANCEL/DEMO for more than 2 seconds.

Setting the Clock

Before operating the unit, set the correct time.
You can set the clock whether the Unit is on or off.

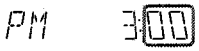
1. Press TIMER/CLOCK.
The hour digits begin flashing.

Flashing

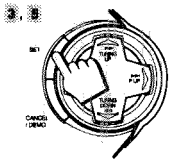


2. Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to set the hours.
Press ⏭ P. UP to increase the hour. Press ⏮ P. DOWN to decrease the hour. Holding down continuously changes the hour setting more rapidly.

3. Press SET.
The minute digits begin flashing.

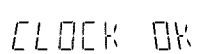


Flashing



4. Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to set the minutes.
Press ⏭ P. UP to increase the minutes. Press ⏮ P. DOWN to decrease the minutes. Holding down continuously changes the minute setting more rapidly.

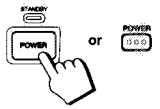
5. Press SET.
"CLOCK OK" appears on the display.
The clock stops flashing, and the clock timer starts from 0 second.



- If the clock is not set, "AM12:00" will flash instead of the clock indication.
- When the time has been set, TIMER/CLOCK can be used to operate the Daily Timer and Recording Timer.
- To adjust the time once the clock has been set, press TIMER/CLOCK 5 times and follow the procedure above.

CAUTION: If there is a power failure, the clock loses its setting. The display shows "AM12:00", and the clock must be reset.

Turning the Power On and Off



Turning the System On

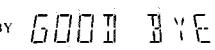
Press POWER.
"WELCOME" appears on the display and the STANDBY indicator goes out.

The System comes on ready to continue in the mode it was in when the power was last turned off.

- If the last thing you were doing was listening to a tape in Deck B, you are now ready to listen to a tape again in Deck B, or you can change to another source.
- If you were listening to the Tuner last, the Tuner comes on playing the station it was last set to.

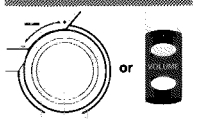
Turning the System Off

Press POWER again.
"GOOD BYE" appears on the display for a while and the STANDBY indicator lights up. The clock time appears on the display.

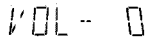


- Some power (16 watts) is always consumed even though the power is on standby.
- To switch off the Unit completely, unplug the AC power cord from the AC outlet. When you unplug the AC power cord, the clock will be reset to AM 12:00 immediately, and preset Tuner stations will be erased in a few days.

Adjusting the Volume



Turn VOLUME clockwise to increase the volume or anticlockwise to decrease it.
Turning VOLUME quickly also adjusts the volume level quickly.
When using the Remote Control, press VOLUME + to increase the volume or press VOLUME – to decrease it.
You can adjust the volume level between 0 and 50.



CAUTION: The Volume cannot be adjusted while the Unit is on STANDBY. DO NOT turn on the Unit and/or start playing any source without setting the VOLUME control to 0; otherwise, the sudden blast of sound can damage your hearing, speakers and/or headphones.

For private listening

Connect a pair of headphones to the PHONES jack. No sound comes out of the speakers.
Be sure to turn down the volume before connecting or putting on headphones.

Balance Adjustment

You can use the Remote Control to adjust the left and right balance of the speakers.

1. Press SHIFT.

2. Press BALANCE L (10) or R (+10).
The display changes to show the balance adjustment.

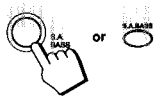
Pressing L (10) moves the pointer to the left, pressing R (+10) moves the pointer to the right.

Display when set for no sound from the right speaker. | **Display at the center position.** | **Display when set for no sound from the left speaker.**

- The balance is normally set to the center position.

Note: If no adjustments are made for 2 seconds in balance adjustment mode, the display reverts to the previous display.

Reinforcing the Bass Sound



S.A. (Signal Adaptive) BASS adjusts low tones at low volume to enhance their effect. When the volume level is low, this enhances low tones that are normally difficult to hear and adjusts low tones to a fixed level to reduce low tone distortion.

Press S.A. BASS.
Pressing S.A. (Signal Adaptive) BASS changes the bass setting in the following order.
→ **SA-BASS1** → **SA-BASS2** → OFF → (back to the beginning)

The S.A. BASS indicator lights up, and "SA-BASS1" or "SA-BASS2" appears on the display for three seconds.

- SA-BASS2 enhances low tones more than SA-BASS1.

To cancel the effect, press S.A. BASS until "OFF" appears on the display. The button light goes out.

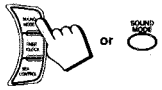
To recall the previous S.A. BASS mode, press S.A. BASS once.

- When listening to recording with low volume low tones, the difference between SA-BASS1 and SA-BASS2 is clear. When listening to recording with louder low tones, however, the difference between SA-BASS1 and SA-BASS2 may not be so clear.

Sound Modes

The System has some preset sound effects that give you control of the way your music sounds, so you can tailor it for your room and for the quality of the source. We can give you some idea of how each one affects the music, but the only way to really tell is to try them yourself.
You can also create up to three of your own customized S.E.A. (Sound Effect Amplifier) settings and store them in the Unit's memory (MANUAL 1, MANUAL 2, MANUAL 3).

- The preset sound modes include modes using surround effects and modes using S.E.A. effects.
- Sound Mode effects cannot be recorded.



To get an effect, press SOUND MODE repeatedly until the Sound Mode you want appears on the display. The Sound Mode selected will appear on the display for three seconds. When a surround effect mode is selected, the frame around the SOUND MODE indicator will light up. When a S.E.A. effect mode is selected, the SOUND MODE indicator will light up.
Each time you press SOUND MODE, the Sound Mode changes as follows:

→ D. CLUB → HALL → STADIUM → ROCK → POP → CLASSIC → MANUAL 1 → MANUAL 2 → MANUAL 3 → OFF → (back to the beginning)

Surround effect modes

D. CLUB (Dance Club)	Increases resonance and bass.
HALL	Adds depth and brilliance to the sound, like in a concert hall.
STADIUM	Adds clarity and spreads the sound, like in an outdoor stadium.

S.E.A. effect modes

ROCK	Boosts low and high frequencies.
POP	Good for vocal music.
CLASSIC	Set for wide and dynamic sound stereo systems.

To cancel an effect, press SOUND MODE until "OFF" appears on the display. The SOUND MODE indicator goes out.

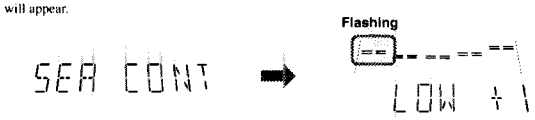
To recall the previous Sound Mode, press SOUND MODE once.

Customizing a Sound Mode

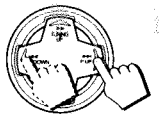
You can change an existing sound mode to suit your own preferences. These changed settings can be stored in the Unit's sound mode memory.

1. Select the Sound Mode you want to change.
If you select D. CLUB, HALL, or STADIUM, the surround effect remains unchanged, but you can adjust the S.E.A. effect.

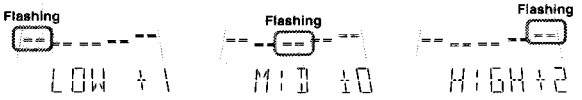
2. Press SEA CONTROL.
The low tone section of the tone equalizer flashes. Once "SEA CONT" appears, the low tone levels will appear.

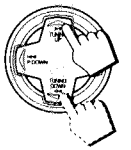


Note: If no adjustments are made for 10 seconds after SEA CONTROL is pressed, Sound Mode will appear on the display then revert to the previous display.

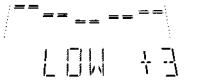


3. Use MULTI CONTROL to adjust to any Sound Mode desired.
Press |◄◄ P. DOWN or ►►| P. UP on the MULTI CONTROL to select the tone range you want to adjust. You can adjust "LOW", "MID" or "HIGH" tone.

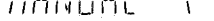


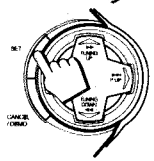


Press ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL to adjust the level.
The level can be adjusted between −3 and +3 in 7 steps.



4. Press SET.
"MANUAL 1" appears on the display.





5. Press |◄◄ P. DOWN or ►►| P. UP on the MULTI CONTROL to select the MANUAL number for the memory.

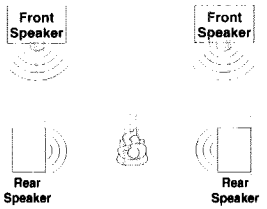
6. Press SET again.
"MEMORY" appears for 2 seconds.
The setting that has been created is stored in the memory.

- The adjustment you have made will apply to the sound you hear.
- If you store new settings to a memory number that has already been used, the new settings replace the existing setting.

When a Rear Speaker is Connected

If the optional rear speaker is connected, you can use the rear speaker to enjoy Surround effects when a Surround effect (D. CLUB, HALL, STADIUM, or a MANUAL setting based on one of these) Sound Mode is selected.

- The rear speaker cannot be used when an S.E.A. effect (ROCK, POP, CLASSIC) is selected.



Adjusting the Rear Speaker Level

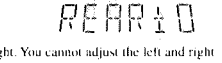
You can use the steps below to adjust the rear speaker level.

1. Select a Surround effect Sound Mode.

2. Start playback from the desired source.

3. Press SHIFT on the Remote Control.

4. Press REAR LEVEL + (8) or − (7) on the Remote Control to adjust the rear speaker level.
Each time you press the button, the level changes one step.

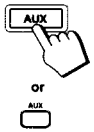


- You can set the level between −10 and +10 in 21 steps.
- The rear speaker level changes equally for both left and right. You cannot adjust the left and right balance for the rear speaker independently.
- You can adjust the rear speaker level for each of the Surround effect modes.

Listening to Auxiliary Equipment

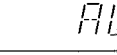
By playing the sound from auxiliary equipment through the System, you can gain control over how the music or program sounds. Once the connected equipment is playing through the System, you can apply the sound effects.

■ First make sure that the auxiliary equipment is properly connected to the System. (See page 6).



1. Turn down the volume level to 0.

2. Press AUX.
"AUX" appears on the display. The AUX button on the Unit lights up.



COMPU PLAY
When AUX is pressed while the power is on standby, the power is automatically turned on.

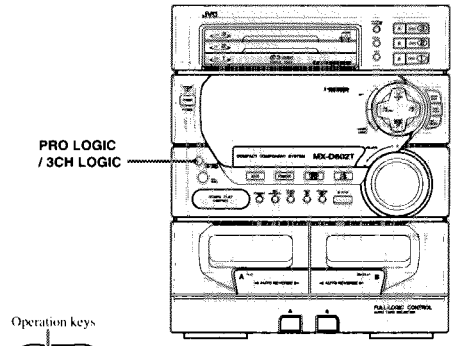
3. Start playing the equipment.

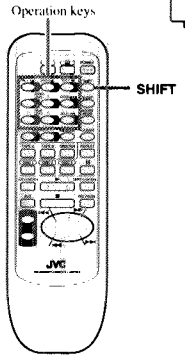
4. Adjust the volume level to the desired listening level.

5. Select a Sound Mode, if you wish.

To cancel the setting
Change the source by starting any one of the System's built-in sound sources, such as the Tuner or CD Player.

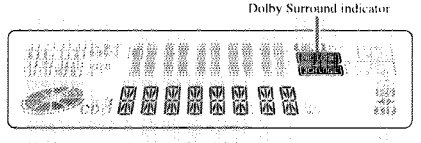
Dolby Surround





Accessing the Dolby Surround Functions
Press the operation keys with green labels on the Remote Control to use the Dolby Surround functions. To use the function marked in green, press SHIFT first, then press the desired operation key.

Display



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

The Dolby Surround has been also developed to reproduce the important elements of the acoustic surround at home. To watch the sound tracks of video software bearing the mark DOLBY SURROUND, which includes the same encoded surround information as found in Dolby Stereo film, the Unit can provide you with two Dolby Surround programs (Dolby Pro Logic and Dolby 3ch Logic).
Dolby Pro Logic: Select this mode when the optional rear speakers are connected.
Dolby 3ch Logic: Select this mode when no rear speakers are connected.

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■ You need to connect the optional center speaker and rear speakers to use the Dolby Surround functions.

Preparing the Dolby Surround

To use the Dolby Surround effects, you need to prepare the various settings.
These settings are set using the Remote Control.
The Dolby Surround settings are:

Center Speaker Mode

Center Speaker mode contains the following four settings.

- **PHANTOM:** Select this setting if you have not connected a center speaker. The left and right front speakers project the sound to give the effect of a center speaker. (PRO LOGIC only)
- **NORMAL:** Select this setting if you are using a small center speaker. Since the center speaker cannot boost the low tones effectively, this setting uses the front speakers to boost the low tones from the center speaker.
- **WIDE:** Select this setting if you are using a center speaker that is similar in power to the front speakers.
- **OFF:** Select this setting to turn off the output for the center speaker.

Delay Time Mode

Delay Time mode contains the following four settings.

- **DELAY 1:** Select this setting if the rear speakers are further away from your listening position than the front speakers. (Delay time: 15 msec.)
- **DELAY 2:** Select this setting if the rear speakers and front speakers are about the same distance way from your listening position. (Delay time: 20 msec.)
- **DELAY 3:** Select this setting if the rear speakers are nearer to your listening position than the front speakers. (Delay time: 25 msec.)
- **DELAY 4:** Select this setting if the rear speakers are very close to your listening position compared to the front speakers. (Delay time: 30 msec.)

Adjusting the level of the Center Speaker

Adjust the level of the center speaker between +10 and –10. Set the level so that it is about the same as the level from the front speakers.

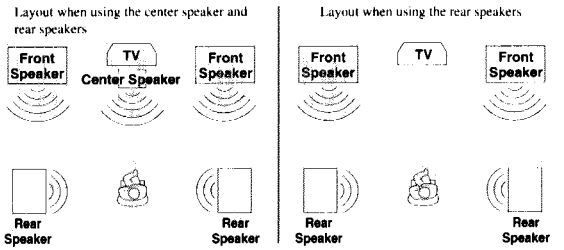
Adjusting the level of the Rear Speakers (for PRO LOGIC only)

Adjust the level of the rear speakers between +10 and –10. Set the level so that it is about the same as the level from the front speakers.

■ You cannot adjust the levels of the left and right rear speakers independently.

Getting Ready To Use Dolby Pro Logic

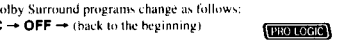
Speaker Arrangements for Dolby Pro Logic



Setting-up Dolby Pro Logic

1. Press PRO LOGIC/3CH LOGIC to select PRO LOGIC.

Each time you press the button, Dolby Surround programs change as follows:
→ **PRO LOGIC** → **3CH LOGIC** → **OFF** → (back to the beginning)



When using the Remote Control, press SHIFT then press PRO LOGIC (1).

- Perform the steps below using the buttons on the Remote Control.

2. Select the desired Center Speaker mode.

Press SHIFT on the Remote Control then press CENTER MODE (6).
Each time you press the button, Center Speaker modes change as follows:
→ **NORMAL** → **WIDE** → **OFF** → **PHANTOM** → (back to the beginning)

3. Select the Delay time.

Press DELAY TIME (9). Each time you press the button, Delay time changes as follows:
→ **DELAY 2** → **DELAY 3** → **DELAY 4** → **DELAY 1** → (back to the beginning)

4. Set the volume to the level you like.

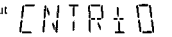
5. Press TEST TONE (3).

A test tone comes out of the speakers in the following order:
→ **LEFT** → **CENTER** → **RIGHT** → **REAR** → (back to the beginning)

- When a test tone comes out of the rear speakers, "SURROUND" appears on the display.
- When "PHANTOM" or "OFF" is selected for Center Speaker mode, no test tone comes out of the center speaker.

6. Adjust the level for the center speaker.

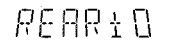
Press CENTER LEVEL + (5) or – (4). Set the level so that it is about the same as the level from the front speakers.



- You cannot adjust the level for the center speaker if "PHANTOM" or "OFF" is selected for Center Speaker mode.

7. Adjust the level for the rear speakers.

Press REAR LEVEL + (8) or – (7). Set the level so that it is about the same as the level from the front speakers.

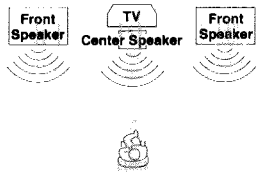


8. Press TEST TONE (3) again.

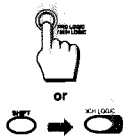
Test Tone mode is canceled.
This completes the preparations required for using Dolby Pro Logic.

Getting Ready To Use Dolby 3 Channel Logic

Speaker Arrangements for Dolby 3 Channel Logic



Setting-up Dolby 3ch Logic



1. Press PRO LOGIC/3CH LOGIC to select 3CH LOGIC.
Each time you press the button, Dolby Surround programs change as follows:
→ PRO LOGIC → 3CH LOGIC → OFF → (back to the beginning)

When using the Remote Control, press SHIFT then press the 3CH LOGIC (2).
- Perform the steps below using the buttons on the Remote Control.

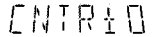
2. Select the desired Center Speaker mode.
Press SHIFT on the Remote Control then press CENTER MODE (6). Each time you press the button, Center Speaker modes change as follows:
→ NORMAL → WIDE → OFF → (back to the beginning)

3. Set the volume to the level you like.

4. Press TEST TONE (3).
A test tone comes out of the speakers in the following order:
- When "OFF" is selected for Center Speaker mode, no test tone comes out of the center speaker.

→ LEFT → CENTER → RIGHT → (back to the beginning)

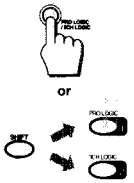
5. Adjust the level for the center speaker.
Press CENTER LEVEL + (5) or – (4). Set the level so that it is about the same as the level from the front speakers.



- You cannot adjust the level for the center speaker if "OFF" is selected for Center Speaker mode.

6. Press TEST TONE (3) again.
Test Tone mode is canceled.
This completes the preparations required for using Dolby 3 Channel Logic.
- You cannot adjust the Delay Time or rear speaker levels in Dolby 3 Channel Logic mode.

Using Dolby Surround

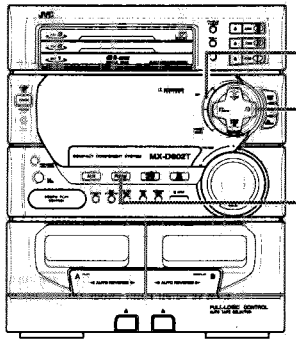


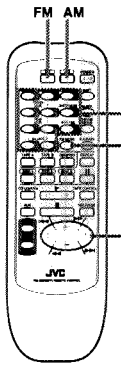
1. Press PRO LOGIC/3CH LOGIC and select the desired mode.
If you are using the Remote Control, press PRO LOGIC (1) or 3CH LOGIC (2) after pressing SHIFT.
Make sure that the center speaker and rear speakers have been set up correctly, as described on pages 15 to 17.

2. Playback as source with the DOLBY SURROUND mark.
Enjoy the great sound achieved through Dolby Surround.

To Cancel Dolby Surround Effects
Press PRO LOGIC/3CH LOGIC until the Dolby Surround indicator goes out. If you are using the Remote Control, press the Dolby Surround buttons (PRO LOGIC (1) or 3CH LOGIC (2)) after pressing SHIFT.

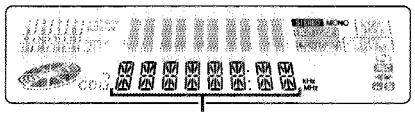
Using the Tuner





Pressing FM or AM makes the Remote Control ready for the Tuner operations.
When the Unit is being operated with the Remote Control, press FM or AM first.

Display



Band display, Frequency display, Preset channel

When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

You can listen to both FM and AM stations. Stations can be tuned in manually, automatically, or from preset memory storage.

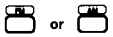
■ Before listening to the radio:
- Check that both the FM and AM antennas are firmly connected. (See page 4.)

Tuning in a Station

Press FM/AM on the Unit (or FM or AM on the Remote Control) to turn on the radio.
The frequency of the previously selected channel appears on the display.

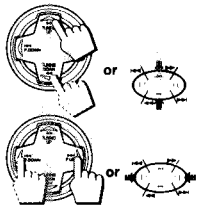
Switching between Frequency Bands
On the Unit
Press FM/AM.
Each time you press the button, the band alternates between FM and AM.

COMPU PLAY
When FM/AM is pressed while the power is on standby, the power is automatically turned on.



On the Remote Control
To tune in FM stations, press FM.
To tune in AM stations, press AM.

COMPU PLAY
When FM or AM is pressed while the power is on standby, the power is automatically turned on.



Three Ways to Select a Station

- Press ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL repeatedly to move from frequency to frequency until you find the one you want. (Manual Tuning).

OR

- Press and hold ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL for a few seconds, the frequency starts changing on the display. When a station is tuned in, the frequency stops changing. (Auto Tuning).

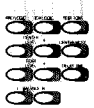
OR

- Possible only after presetting stations.
  Press once and release |◄◄ P. DOWN or ►►| P. UP on the MULTI CONTROL to go to the next preset station.

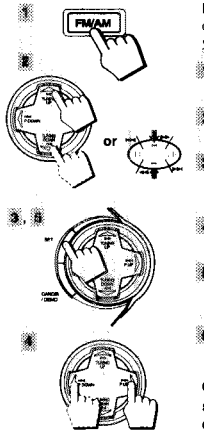
You can also use the Remote Control to tune in preset channels:

1. Press FM or AM so that you can receive the last station tuned in.
2. Select the station by entering the preset number in the number keys of the Remote Control.
   - Example: for channel 5, press 5. For channel 15, press +10 then 5.
     For channel 20, press +10, then 10. For channel 30, press +10 twice then 10.

   - After you have selected the preset number and the number appears, the broadcast frequency of the selected channel appears on the display.



Presetting Stations



You can preset up to 30 FM stations and up to 15 AM stations for the preset numbers.
Note: In some cases, test frequencies have been already memorized for the tuner since the factory examined the tuner preset function before shipment. This is not a malfunction. You can preset the stations you want into memory by following the presetting method.

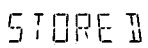
1. Select a band by pressing FM/AM on the Unit.
When using the Remote Control, press FM or AM.

2. Press ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL to tune into a station.

3. Press SET.
"SET" flashes for 5 seconds.
While it is still flashing, carry out the following procedure.

4. Press |◄◄ P. DOWN or ►►| P. UP on the MULTI CONTROL on the Unit to set the preset number.

5. Press SET again.
"STORED" appears for 2 seconds. The preset station is stored in the memory.



6. Repeat steps 1 to 5 for each station you want to store in memory using different preset numbers.

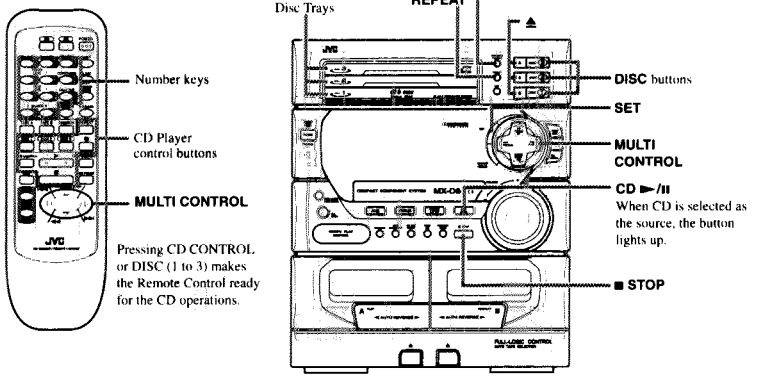
CAUTION: If the Unit is unplugged or if a power failure occurs, the preset stations will be erased in a few days. If this happens, preset the station again.

Changing the FM Reception Mode

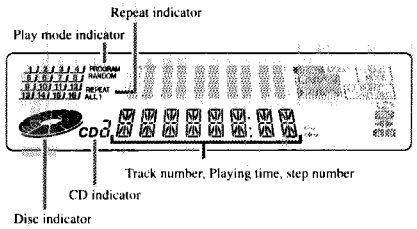
When an FM stereo broadcast is hard to receive or noisy, press FM MODE on the Remote Control so that the MONO indicator lights up on the display. Reception improves, but there is no stereo effect.

To restore the stereo effect, press FM MODE on the Remote Control so that the MONO indicator goes out. In this stereo mode, the STEREO indicator lights up and you can hear stereo effects, when a program is broadcast in stereo.

Using the CD Player



Display



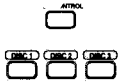
Disc Indicator
Flashes while a CD is playing.
Is lit when a CD has stopped or is paused.

CD Indicator
Indicates the number of the disc selected.

When the System is being used, the display shows other items as well.
However, we have only shown the items described in this section.

The System's CD Player has an Automatic Changer with 3 disc trays. You can use Continuous, Random, Program or Repeat Play for the discs in DISC 1, DISC 2 and DISC 3. Repeat Play can repeat all the tracks on all the CD's or one track on one CD. There is also the Tray Lock function, which safely keeps discs in the trays.

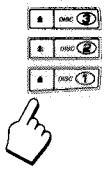
Here are the basic things you need to know to play a CD and locate the different selections on it. Each selection is called a track, so when we are talking about locating a track, we are also talking about how you find a certain song or performance.



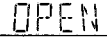
Entering CD Operation Mode with the Remote Control

Pressing CD CONTROL or DISC (1 to 3) makes the Remote Control ready for the CD operations.
Operate the CD player with ►, ■, MULTI CONTROL and number keys.
The explanation provided in this section assumes that the Remote Control has been put into CD operation mode. When you use the Remote Control, press CD CONTROL first.

Loading CDs



1. Press ≜ on the CD Player you want to insert the disc onto.
"OPEN" appears on the display and the disc tray slides out.



COMPU PLAY
When ≜ is pressed while the power is on standby, the power is automatically turned on.

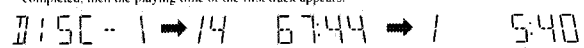
2. Place a CD, with its label side up, onto the tray.

ATTENTION: *To avoid malfunctions when you play a CD, set the CD in the right place at the center of the tray.*

3. Press ≜ to close the tray.
"CLOSE" appears on the display.

4. Repeat steps 1 to 3 to insert other discs onto the other trays.
- To continue putting discs onto other trays, even if a tray is open, by pressing the ≜ button of another disc tray, the open tray will close automatically, and the new disc tray will slide out.

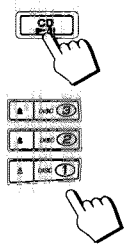
■ When you place a CD onto the currently selected tray, whose disc number shown on the CD indicator, reading of the CD starts. The total number of tracks and total playing time appear after the reading is completed, then the playing time of the first track appears.



Reading now (flashing) | **Total number of tracks and playing time** | **Playing time of the 1st track**

■ To put an 8 cm CD onto a tray, insert it so that it is aligned with the groove in the tray's center.
■ If a tray is open when the System switches to the standby mode, the tray will close automatically.

Basics of Using the CD Player — Continuous Play



Playing a CD

Prepare the CDs.

On the Unit

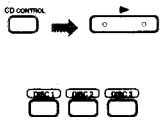
Press CD ►/II.
The source is set to CD and play starts from the first track of the currently selected CD whose disc number shown on the CD indicator.

Press DISC (1 to 3) of the disc you want to play.
The source is set to CD and play starts from the first track of the selected CD.

COMPU PLAY
When CD ►/II or DISC (1 to 3) is pressed while the power is on standby, the power is automatically turned on.

■ When you press CD ►/II or DISC (1 to 3) while the disc tray is open, the tray will automatically close before beginning to play.
■ If there is no CD in the disc tray, "NO DISC" appears on the display.

Playing order of discs
■ When playback starts from DISC 1, the playing order is DISC 1 → DISC 2 → DISC 3.
When DISC 3 has finished, the CD Player stops.
■ When playback starts from DISC 2, the playing order is DISC 2 → DISC 3 → DISC 1.
When DISC 1 has finished, the CD Player stops.
■ When playback starts from DISC 3, the playing order is DISC 3 → DISC 1 → DISC 2.
When DISC 2 has finished, the CD Player stops.
- If any of the disc trays are empty, the CD Player skips that disc tray and continues through the remaining disc trays in the order shown above. When the last disc has finished playing, the Unit will stop automatically.

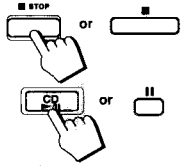


On the Remote Control

Press CD CONTROL then press ►.
The source is set to CD and play starts from the first track of the currently selected CD whose disc number shown on the CD indicator.
- If the above operation is carried out while the power is on standby, the power is automatically turned on.

Press DISC (1 to 3) of the disc you want to play.
The source is set to CD and play starts from the first track of the selected CD.

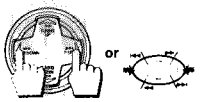
COMPU PLAY
When DISC (1 to 3) on the Remote Control is pressed while the power is on standby, the power is automatically turned on.



To stop play the disc, press ■ STOP (or ■ on the Remote Control). The display will show the total number of tracks and total playing time of the disc that was playing followed by the playing time of the first track.
To stop play and remove the disc, press ≜ for the disc being played.
To pause, press CD ►/II (or II on the Remote Control). The playing time will flash.
To cancel pause, press CD ►/II (or ► on the Remote Control) the Unit. Play continues from the point where it was paused.

Selecting a Track

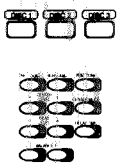
Press I◄◄ P. DOWN or ►►I P. UP on the MULTI CONTROL to select the track.
The selected track starts playing.
■ Each time you press I◄◄ P. DOWN or ►►I P. UP, the track changes by one.
Press and hold I◄◄ P. DOWN or ►►I P. UP to continuously change tracks.



Locating a Track with the Remote Control Directly

Using the number keys on the Remote Control allows you to go directly to the beginning of any track.

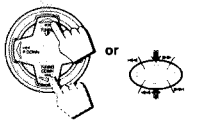
1. Press the DISC (1 to 3) for the disc tray containing the track you want to listen to.
- Example: for the third disc, press DISC 3.



2. Enter the number of the track you want to listen to with the number keys.
The selected track starts playing.
- Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10, then 10. For track 32, press +10 three times, then 2.

Fast Forward / Reverse

Use ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL.
For Fast Forward, press and hold down ►► TUNING UP. For Reverse, press and hold down TUNING DOWN ◄◄. Release the button when the part you wish to listen to is reached.



Changing Discs While Playing

You can replace a CD in a tray not being used, while another CD is playing.

1. Press ≜ of the tray not being used.
The tray opens.

2. Replace the disc in the tray.

3. Press ≜ to close the tray.

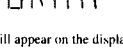
Programing the Playing Order of the Tracks

You can change the order in which the discs and tracks play, and select only the discs and tracks you want from among those loaded in the CD Player.

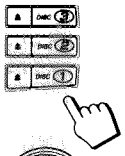
- You can program up to 32 steps in any desired order from among the discs in the CD player.
- You can only make a program when the CD Player is stopped.

On the Unit

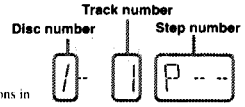
1. Press PROGRAM/RANDOM.
"PROGRAM" appears on the display and the PROGRAM indicator lights up.
If you have already created a program, the last step of the previous program will appear on the display.



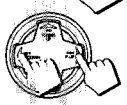
Each time you press the button, play mode changes as follows:
→ **PROGRAM** → **RANDOM** → No Play mode indicator (Continuous Play) → (back to the beginning)



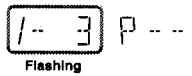
2. Select a disc with DISC (1 to 3).
The display changes to the Program Entry display and the disc number and track number flash for a few seconds.

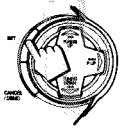


- While the indications are flashing, perform the operations in steps 3 to 4. When the flashing indications change to "PROGRAM", repeat the operations in steps 2 to 4.

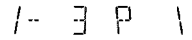


3. Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to select a track for programing.
The disc number and track number starts flashing on the display.





4. Press SET.
The indications on the display stop flashing and remain lit.
The step number appears on the display.

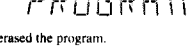


5. Repeat steps 2 to 4 to select the other tracks for the program.
To select another track from the same disc, repeat the procedure from step 3.

6. Press CD ►/II.
The Unit plays the tracks in the order you have programed them.

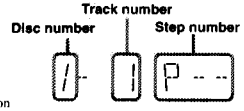
On the Remote Control

1. Press PROGRAM/RANDOM on the Unit.
"PROGRAM" appears on the display and the PROGRAM indicator lights up.
If you have already created a program, the last step of the previous program will appear on the display unless you have erased the program.

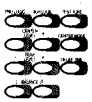


Each time you press the button, play mode changes as follows:
→ **PROGRAM** → **RANDOM** → No Play mode indicator (Continuous Play) → (back to the beginning)

2. Select a disc with DISC (1 to 3).
The display changes to the Program Entry display and the disc number and track number flash for a few seconds.

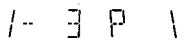


- While the indications are flashing, perform the operation in step 3. When the flashing indications change to "PROGRAM", repeat the operations in steps 2 to 3.



3. Press the number keys (1 to 10 and +10) to select the tracks.
The indications on the display stop flashing and remains lit.
The selected track numbers light up and the step number appears on the display.

- Example: For track 5, press 5.
  For track 15, press +10 then 5.
  For track 20, press +10 then 10.
  For track 32, press +10 three times, then 2.



4. Repeat steps 2 to 3 to select the other tracks for the program.

5. Press ►.
The Unit plays the tracks in the order you have programed them.

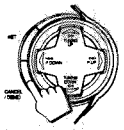
- If you try to program a 33rd track, "FULL" will appear on the display to let you know that the program is full.
- If you try to program a disc tray that is empty, or a track number that does not exist on a disc (for example, selecting track 14 on a disc that only has 12 tracks), the selected disc or track are skipped when the program is played.
- You can skip to a particular program step by pressing the MULTI CONTROL (⏮ P. DOWN or ⏭ P. UP) or ⏮ or ⏭ on the Remote Control during program play.
- To play the programed tracks repeatedly, press REPEAT. For details, refer to "Repeating a Track or the Discs" on page 25.

To stop playing, press ■ STOP (or ■ on the Remote Control) once.
To delete all the tracks in a program, press ■ STOP (or ■ on the Remote Control) while the CD Player is stopped. The program is deleted and "PROGRAM" appears on the display.
To cancel program play, press ■ STOP (or ■ on the Remote Control) while "PROGRAM" is shown on the display.

Checking the Program

While the CD Player is stopped, use ⏮ or ⏭ on the Remote Control to check the contents of the program.
Each time you press ⏭, the program contents are shown on the display in the programed order. Pressing ⏮ displays the previous step in the program.

Changing the Program

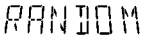


Modify the contents of a program while the CD Player is stopped.
Press CANCEL/DEMO on the Unit, the last step in the program is deleted.
Each time you press the button, the last step listed in the program is deleted from the program.
To add a step to the program, follow the procedure above (on either the Unit or the Remote Control).
The new steps are added to the end of the program.

Random Play

The tracks of all loaded CDs will play at random.

1. Press PROGRAM/RANDOM while the CD Player is stopped to change to the Random Mode display.



Each time you press the button, play mode changes as follows:
→ **PROGRAM** → **RANDOM** → No Play mode indicator (Continuous Play) → (back to the beginning)

2. Press CD ►/II.
The tracks of all the CDs are played in random order.
When all of the tracks have been played, the CD Player stops.

Note: Random Play cannot be activated with the DISC buttons and the number keys.

- You can skip to the next track by pressing ⏭ P. UP on the MULTI CONTROL (or ⏭ on the Remote Control) during Random Play. Each time you press the button, the next track is jumped to. (You cannot skip to the previous tracks, nor to the beginning of the current track during Random Play.)
- To continue with a different random track selection after the last track is played, press REPEAT to select REPEAT ALL before or during Random Play.

To cancel Random Play, press ■ STOP (or ■ on the Remote Control) twice. When the RANDOM indicator goes out, Continuous Play mode is resumed.

Repeating a Track or the Discs

You can have all the discs, the program or the individual track currently playing repeat as many times as you like.

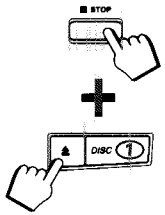
Press REPEAT on the Unit.
Each time you press the button, the Repeat Modes change as follows.
→ **REPEAT ALL** → **REPEAT 1** → No indicator → (back to the beginning)

REPEAT ALL: Repeats all the tracks on the CDs, or all the tracks in the program.
REPEAT 1: Repeats one track on one CD.

To exit Repeat Mode, press REPEAT until the Repeat Mode indicator on the display goes out.

Tray Lock Function

In order to safely keep the discs in the CD Player, the three trays can be electronically locked in a single operation.
When the Tray Lock function is on, the trays cannot be opened even if the ≜ button is pressed.
This function can only be accessed by using the buttons on the Unit itself.



Locking the Trays

1. **Put the System's power into STANDBY mode.**
2. **While pressing ■ STOP, press ≜ for DISC 1 on the Unit.**
"LOCKED" appears on the display to let you know that the trays have been locked.

LOCKED

When the CD Player trays are locked, pressing ≜ displays the message "LOCKED" on the display and the trays do not open. Also, ≜ cannot be used to automatically turn on the power.

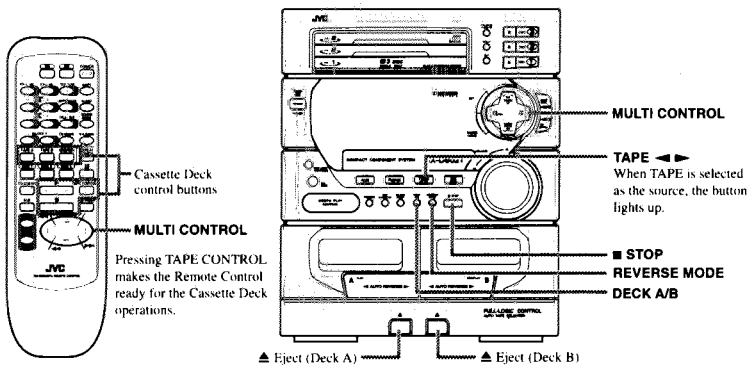
Unlocking the Trays

1. **Put the System's power into STANDBY mode.**
2. **While pressing ■ STOP, press ≜ for DISC 1 on the Unit.**
When the unlock operation is done, "UNLOCKED" appears on the display to show that the lock has been taken off.

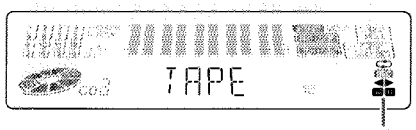
UNLOCKED

The trays can now be opened by pressing ≜.
The ≜ can also be used to automatically turn on the power.

Using the Cassette Deck (Playing)


Cassette Deck control buttons
MULTI CONTROL
Pressing TAPE CONTROL makes the Remote Control ready for the Cassette Deck operations.
MULTI CONTROL
TAPE ◄ ►
When TAPE is selected as the source, the button lights up.
■ STOP
REVERSE MODE
DECK A/B
≜ Eject (Deck A)
≜ Eject (Deck B)

Display



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

Tape Direction Indicator on the Display
The Tape Direction indicator tells you which direction the selected tape deck will use for playback.
During playback, the direction indicator flashes slowly.
During fast left or fast right, the indicator flashes quickly.
During Music Scan mode, the indicator flashes slowly and quickly alternately.

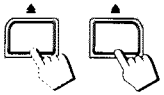
: Reverse Mode indicator
: Tape Direction indicator
A B : DECK A, B indicator

The Cassette Deck allows you to play, record and dub audio tapes.
■ With Automatic Tape Detection, you can listen to Type I or II tapes without changing any settings.

The use of tapes longer than 120 minutes is not recommended, since characteristic deterioration may occur and these tapes easily jam in the pinch-rollers and the capstans.

Entering the TAPE Operation Mode with the Remote Control
Pressing TAPE CONTROL makes the Remote Control ready for the Cassette Deck operations.
Operate the Cassette Deck with ►, ■ and MULTI CONTROL.
The explanation provided in "Using the Cassette Deck" section assumes that the Remote Control has been put into Cassette Deck operation mode. When you use the Remote Control, press TAPE CONTROL first.

Regular Play



When the power is already on, you can use this basic procedure:

1. Press down ▲ for the deck you want to use.

2. When the cassette holder opens, put a cassette in, with the exposed part of the tape down, toward the base of the Unit.

- If the cassette holder does not open, turn the power off, then back on and press down ▲ again.

3. Close the holder gently.

When both Deck A and Deck B contain a tape, the last deck to have a tape inserted is selected.
To change the selected deck, press DECK A/B. When using the Remote Control, press TAPE A or TAPE B.

4. Press TAPE ◄ ► on the Unit.

COMPU PLAY

When the TAPE ◄ ► is pressed while the power is on standby, the power is automatically turned on.

When using the Remote Control, first press TAPE CONTROL followed by ►.
If the power is on standby, the power will automatically be turned on.
When "TAPE" appears on the display, the tape play starts toward the direction currently selected.

To stop playing, press ■ STOP on the Unit (or ■ on the Remote Control).
To remove the tape, stop the tape, and press down ▲.
To change deck while playing a tape, press TAPE ◄ ► after pressing DECK A/B on the Unit or press ► after pressing TAPE A or TAPE B on the Remote Control.
To change the direction of a tape while it is playing, press TAPE ◄ ► on the unit or DIRECTION on the Remote Control.

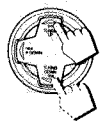
Fast Left and Fast Right

- While the tape is stopped, press TUNING DOWN ◄◄ on the MULTI CONTROL (or ◄◄ on the Remote Control) and the tape will wind rapidly to the left side of the cassette without playing.
- While the tape is stopped, press ►► TUNING UP on the MULTI CONTROL (or ►► on the Remote Control) and the tape will wind rapidly to the right side of the cassette without playing.

Note: Deck A and Deck B cannot be used for playback at the same time.

Music Scan

To find the beginning of a music track during play, use the Music Scan function. Music Scan searches for blank portions that usually separate selections, then plays the next selection.



Finding the Beginning of the Current Selection

Press ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL (or ◄◄ or ►► on the Remote Control) during play.

- Make sure that you press ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL (or ◄◄ or ►► on the Remote Control) in the opposite direction to that in which the tape is playing. Searching stops at the beginning of the current selection, and the current selection starts automatically.

or

Finding the Beginning of the Next Selection

Press ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL (or ◄◄ or ►► on the Remote Control) during play.

- Make sure that you press ◄◄ TUNING DOWN or TUNING UP ►► on the MULTI CONTROL (or ◄◄ or ►► on the Remote Control) in the same direction as that in which the tape is playing. Searching stops at the beginning of the next selection, and the next selection starts automatically.

Music Scan works by detecting a 4-second long blank at the beginning of each selection, so it will not work well if your tape has • • •

- No blank at the beginning of a selection.
- Noise (often caused by much use or poor quality dubbing) which fills the blank with noise.
- Long, very soft passages or pauses in a selection. The scan will detect these as 4-second long blanks. If this happens, just scan again until you reach the selection you want.

Reverse Mode

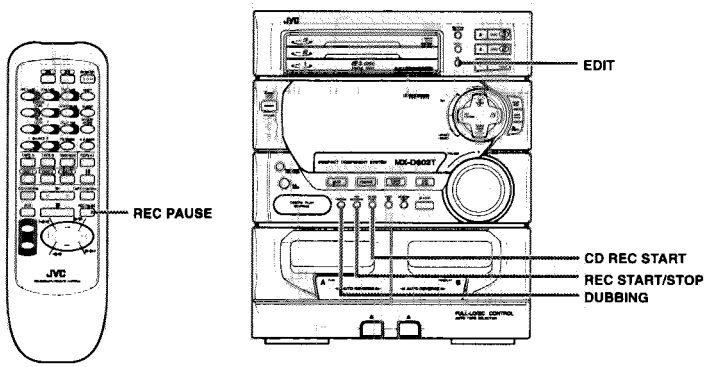
- Use **Reverse Mode** to make the tape automatically reverse at the end of a side and start playing the other side.
  Each time you press REVERSE MODE, the Reverse Mode turns on and off alternately.

Reverse Mode ON

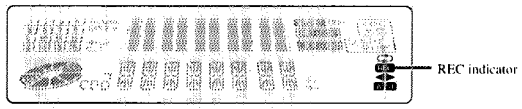
Reverse Mode OFF

- **Continuous Play:** With the Reverse Mode indicator on, when tape playback in the reverse (◄) direction finishes, the Unit always checks to see if a tape is in the other deck. If there is, it automatically starts playing. This Continuous Play function works regardless of which deck starts first.

Using the Cassette Deck (Recording)



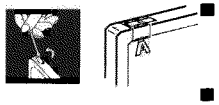
Display



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

Things to Know before You Start Recording

- **It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic, musical, or artistic embodied therein.**
- When you want to record onto both sides of a tape, you can set Reverse mode on to do so. However, recording automatically stops after recording in the ◄ direction in Reverse mode. Therefore, make sure that the tape direction is ► when recording with Reverse mode on.
- The recording level, which is the volume at which the new tape is being made, is automatically set correctly, so it is not affected by volume control. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- Two small tabs on the back of the cassette tape, one for side A and one for side B, can be removed to prevent accidental erasure or re-recording. To record on a cassette with the tabs removed, you must cover the holes with adhesive tape first.
  However, when a Type II tape is used, only cover part of the hole as shown, since the other part of the hole is used to detect the tape type.
- When recording, you can hear Sound Mode effects through the speakers or headphones. However, the sound is recorded without Sound Mode effects.
- Type I and Type II tapes can be used for recording.



Note: At the start and end of cassette tapes, there is leader tape which cannot be recorded onto. Depending on the recording source, the first part of the recording may be missing because of the leader. When recording CDs or radio broadcasts, to get the beginning of the recording on the tape, first wind on the leader before beginning recording.

CAUTION: If recordings you have made have excessive noise or static, the Unit may be too close to a TV which was on during recording. Either turn off the TV or increase the distance between the TV and the System.

Standard Recording

This is the basic method for recording any source. The System also has special ways for recording CD to tape, and tape to tape, which save your time and effort, as well as give you some special effects. However, when you need to add a selection to a tape you have made, or are combining selections from several sources on one tape, use the method described below; just substitute the source you want into this procedure, such as a CD or the Tuner. You can also record from auxiliary source with this procedure.

Using the Unit

1. Insert a blank or erasable tape into Deck B.

2. Press REVERSE MODE if you want to record on both sides of the tape.
Reverse Mode comes on.
- When using Reverse Mode, insert the tape so that it will be recorded in the forward (►) direction.

3. Check the recording direction for the tape.
Check that the Tape Direction indicator is the same as that for the tape in the tape deck. If the directions are different, press ■ STOP after pressing TAPE ◄► to set the tape direction.
- When using the Reverse Mode to record both sides of a tape, check that the Tape Direction indicator is in the forward (►) direction. If the direction indicator is not in the forward (►) direction, press TAPE ◄► then press ■ STOP.

4. Prepare the source, for example, by tuning in a radio station, loading CDs, or turning on connected equipment.

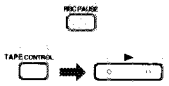
5. Press REC START/STOP.
The REC indicator lights up and the System begins recording.

Using the Remote Control

1. Insert a blank or erasable tape into Deck B.

2. Press REVERSE MODE on the Unit if you want to record on both sides of the tape.
Reverse Mode comes on.
- When using Reverse Mode, insert the tape so that it will be recorded in the forward (►) direction.

3. Prepare the source, for example, by tuning in a radio station, loading CDs, or turning on connected equipment.



4. Press REC PAUSE.
The REC indicator starts flashing.

5. Press TAPE CONTROL then press ►.
Recording starts.
The REC indicator stops flashing and remains lit.

Notes for using Reverse Mode for recording

When recording with Reverse Mode on, the System automatically stops when it reaches the end of the reverse (◄) direction. To record on both sides of a tape, make sure that the recording direction for the tape inserted into Deck B is forward (►), and that the Tape Direction indicator is also forward (►), before you start recording.

To pause at any time during the recording process

Press REC PAUSE on the Remote Control. Then press ► on the Remote Control or REC START/STOP on the Unit to restart recording.

To stop at any time during the recording process

Press REC START/STOP on the Unit again, or press ■ on the Remote Control.

Recording AM Station to Tape

When recording an AM broadcast, beats may be produced which are not heard when listening to the broadcast. In this case, press PROGRAM/RANDOM on the CD Player to eliminate the beats.

1. Set to AM station and start recording.

2. Press PROGRAM/RANDOM repeatedly until the beats are eliminated.
Each time you press the button, the indication on the display changes as follows:
→ CUT 2 → CUT 3 → CUT 1 → (back to the beginning)

CD Direct Recording

Everything on the CD goes onto the tape in the order it is on the CD, or according to the order you have set in a program.

1. Press CD ►/II, then ■ STOP.

2. Prepare CDs. (See page 21.)
Check that the CD Player is not playing a CD.

3. Insert a blank or erasable cassette in Deck B.
- When you want to record on both sides of a tape, press REVERSE MODE to turn on Reverse Mode. Check that the recording direction for the tape and the Tape Direction indicator are correct. (See page 30 "Notes for using Reverse Mode for recording".)

4. Press CD REC START.
"CD REC" appears on the display, the REC indicator lights up, and the System begins recording.
If the tape reaches its end while recording a song, the last song will be re-recorded at the beginning of the other side.
When the recording is finished, "CD REC FINISHED" scrolls by on the display. The CD Player and Cassette Deck stop.

To stop at any time during the recording process, press ■ STOP.

Note: When making Sleep Timer settings while doing CD Direct recording, set the time so that there is enough leeway to finish the recording before the power turns off. If the time is set to about the length of the CD, the power may turn off before recording finishes.

For CD Direct Recording using more than one disc, use a blank tape. If you use a prerecorded tape, prerecorded material may not be erased between newly-recorded tracks.

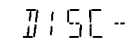
Auto Edit Recording

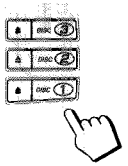
Using Auto Edit, you can record the CD tracks to fit the tape, so a selection is not cut off. Auto Edit is one of the best ways to copy all of a CD onto a tape. Auto Edit programs the CD tracks in numerical order. To prevent the end of the last track on the front side from being cut off, the last track on the front side is selected to fit on the remaining tape length.

1. Press CD ►/II, then ■ STOP.

2. Prepare CDs. (See page 21.)
Check that the CD Player is not playing a CD.

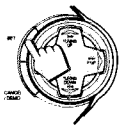
3. Press EDIT on the Unit.
"DISC-" appears on the display.





4. Press DISC (1 to 3) for the disc you want to record.
After "TAPE C - -", the optimum tape length for the disc appears on the display.

- You can select a different length of tape, depending on the actual size of the tape you are using, from eleven possibilities programed into the Unit: 40, 46, 50, 54, 60, 64, 70, 74, 80, 84, 90. Select the tape length that corresponds to the length of tape you are using, or the nearest length to it, by adjusting ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL.
  - If you select a tape length shorter than the total playing time of the CD, the last tracks on both sides of the tape will be faded out as the tape ends.



5. Press SET.
The tracks to be recorded on side B appear on the display.

- Each time you press the button, the tracks to be recorded on side A and side B appear on the display alternately.

6. Insert a blank or erasable cassette in Deck B.
When you want to record on both sides of a tape, press REVERSE MODE to turn Reverse mode on.

7. Press CD REC START .
The Unit plays the CD and starts recording. If the tape has not been rewound, the Unit rewinds the tape before starting to record the CD.

To stop at any time while recording, press ■ STOP or REC START/STOP on the Unit. If ■ STOP is pressed, the Cassette Deck will create a four-second blank space after the CD Player stops. If REC START/STOP is pressed, the CD Player and Cassette Deck will stop simultaneously. When ■ is pressed on the Remote Control, the stop time of the CD Player and Cassette Deck vary according to their mode (CD operation mode or Cassette Deck operation mode). If the Remote Control is in CD operation mode, the Cassette Deck will stop four second after the CD Player stops. If the Remote Control is in Cassette Deck operation mode, the CD Player and Cassette Deck will stop simultaneously.

To cancel Auto Edit, press PROGRAM/ RANDOM while the CD Player is stopped or press ⏏ for the disc number being recorded.

Note: When making Sleep timer settings while doing Auto Edit recording, set the time so that there is enough leeway to finish the recording before the power goes off. If the time is set to about the length of the CD, the power may go off before recording finishes.

Tape to Tape Recording (Dubbing)

Recording from one tape to another is called dubbing.
- When dubbing tapes, make sure that the playback direction of Deck A and Deck B are the same.
- When you record both sides of a tape, press REVERSE MODE to turn on the Reverse Mode.
- It is preferable that the type of tape (Type I or Type II) you record from be the same as the type you record onto.

How to Use DUBBING

1. Press TAPE ◄ ►, then ■ STOP.

2. Insert the source cassette you want to copy from into Deck A for playback.
Insert the cassette so that it will be played in the forward (►) direction.

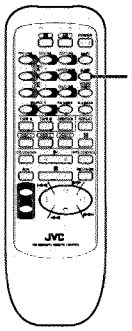
3. Insert the blank or erasable cassette you want to copy onto into Deck B for recording.
Insert the cassette so that it will be recorded in the forward (►) direction.

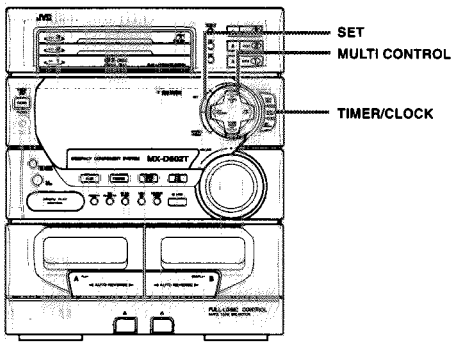
4. Press DUBBING.
Deck A and Deck B start simultaneously.

To stop dubbing, press ■ STOP.

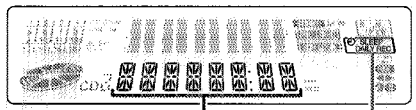
- When dubbing, you can hear Sound Mode effects through the speakers or headphones. However, the sound is dubbed without Sound Mode effects.

Using the Timer





Display



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

The timers let you control recording and listening functions automatically.
Three types of timers are available:

- **Daily Timer** — Use this timer to set wake up everyday to music from any source, instead of an alarm clock.
- **Recording Timer** — Unattended recording of radio broadcasts. You can set the starting time and stopping time of the recording.
- **Sleep Timer** — Fall asleep and have your Unit turn off automatically after a certain length of time.

Note: When operating the Daily Timer and Recording Timer, always set the clock first. If the clock is not set, the Daily Timer and Recording Timer functions cannot be used. For details, refer to "Setting the Clock" on page 9.

Setting the Daily Timer

With this timer you can wake up to music from a CD, tape, your favorite radio program.

- You can set the Daily Timer whether the Unit is on or off.

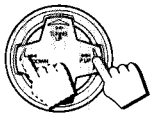
Procedure For Setting the Daily Timer

1. Press TIMER/CLOCK so that "DAILY" appears on the display.
The DAILY indicator flashes on the display.

- Each time you press the button, the timer setting indication changes as follows:
  DAILY → ON TIME (flashes) → **REC → ON TIME** (flashes) → Clock setting → Canceled (current source) → (back to the beginning)

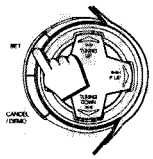
Note: If the clock has not been set, even if TIMER/CLOCK is pressed you cannot select the Daily Timer.

2. Press TIMER/CLOCK again.
After "ON TIME" flashes for 2 seconds, it switches to the on-time setting display.



3. Set the time you want the Unit to turn on.
Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to adjust the hours and press SET.
Then press ⏮ P. DOWN or ⏭ P. UP to adjust the minutes and press SET.

- After adjusting the minutes and pressing SET, "OFF TIME" flashes for two seconds and on-time setting is completed.

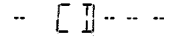


4. Set the time you want the Unit to turn off.
Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to adjust the hours and press SET.
Then press ⏮ P. DOWN or ⏭ P. UP to adjust the minutes and press SET.

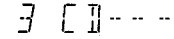
- When the off-time has been set, the indication on the display changes to the source selection.
- To select the source to be played, press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL until your choice is shown.

5. Select the source you want to listen to.
To use a CD as the source:

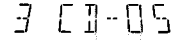
1. **Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL repeatedly until "- CD - - -" flashes on the display and press SET.**



2. **Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL repeatedly to select the CD disc number to be played and press SET.**
   If you press SET without selecting a disc, the last disc played by the Unit will be used.



3. **Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL repeatedly to select the CD track number to be played and press SET.**
   If you press SET without selecting a track, playback will start from the first track on the CD.



To use the Tuner as the source
(Possible only after presetting stations.):

1. **To listen to FM, press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL repeatedly until "TUNER FM" flashes and press SET.**
   To listen to AM, press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL repeatedly until "TUNER AM" flashes and press SET.

TUNER FM or TUNER AM

2. **Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL repeatedly to select the station to be listened to as a preset channel and press SET.**

P- 5

To use a Cassette Deck as the source:
Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL repeatedly until "TAPE" flashes on the display and press SET.

TAPE

6. Setting the Volume Level.
Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to adjust the volume.

VOL - - - -

VOL - 10: Sets the volume level to 10.
VOL - 15: Sets the volume level to 15.
VOL - 20: Sets the volume level to 20.
VOL - - -: Sets the volume to the last volume setting used.

7. Press SET.
The DAILY indicator stops flashing and remains lit. The on-time, off-time, playback source (including the disc number and track number if a CD source is selected), and volume level appears on the display.
Turn the power off if you made the timer settings with the power turned on.

- A few seconds before the on-time, the Unit automatically turns on the power. When the on-time comes, playback starts using the selected source. A few seconds before the off-time, "OFF" flashes on the display. When the off-time comes, the power is automatically turned off.
- If a button is pressed when the Daily Timer is operating, playback continues but the timer is canceled.

Before turning off the Unit
- If the source is a CD, make sure that there is a CD in the selected disc number.
- If the source is a tape:
  - The tape in the deck corresponding to the Deck indicator mark is played. Make sure that there is a tape in the selected Cassette Deck.
  - Check that the tape direction is correct. This is important especially when Reverse Mode is off.
  - Set Reverse Mode on if you want to play both sides of the tape.
- Select the Sound Mode if you want to listen using a Sound Mode effect.

To change the Daily Timer setting
To change the settings for the Daily Timer, repeat the setting procedure from the beginning.

Turning the Daily Timer On and Off

Once the Daily Timer has been set it will be activated at the same time every day until the setting is turned off.
To turn the Daily Timer off, press TIMER/CLOCK until "DAILY" appears on the display. Press CANCEL/DEMO. "OFF" appears on the display and the DAILY indicator goes out.
To turn the Daily Timer on again, press TIMER/CLOCK until "DAILY" appears on the display, then press SET. The Timer on-time, off-time, playback source (including the disc number and track number if a CD source is selected), and volume level appear on the display, and the DAILY indicator lights up.

CAUTION: If the Unit is unplugged, or a power failure occurs, the timer setting will be erased in a few days. If the settings are erased in this way, reset the timer settings.

Setting the Recording Timer

With the Recording Timer you can make a tape of a radio broadcast automatically whether or not you are home. For the timer to work correctly, you need to make sure of the following in addition to setting the time for the Tuner and Cassette Deck to come on:
- You can set the Recording Timer whether the Unit is on or off.
- The tape you want to record onto must be in Deck B.

Procedure for Setting the Recording Timer

1. Press TIMER/CLOCK repeatedly until "REC" appears on the display.
The REC indicator flashes on the display.

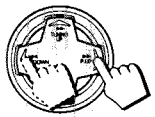
REC

- Each time you press the button, the timer setting indication changes as follows:
  DAILY → ON TIME (flashes) → **REC → ON TIME** (flashes) → Clock setting → Canceled (current source) → (back to the beginning)

Note: If the clock has not been set, even if TIMER/CLOCK is pressed you cannot select the Recording Timer.

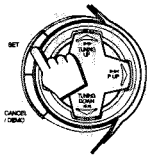
2. Press TIMER/CLOCK again.
After "ON TIME" flashes for 2 seconds, it switches to the time setting display.

3. Set the time you want the Unit to be turned on.
Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to adjust the hours and press SET. Then press ⏮ P. DOWN or ⏭ P. UP to adjust the minutes and press SET.



4. Set the time you want the Unit to be turned off.
Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to adjust the hours and press SET. Then press ⏮ P. DOWN or ⏭ P. UP to adjust the minutes and press SET.

5. Select the Recording band.
Press ⏮ P. DOWN or ⏭ P. UP on the MULTI CONTROL to select "TUNER FM" or "TUNER AM" and press SET.



6. Select the preset channel for the station to be recorded.
Press MULTI CONTROL ⏮ P. DOWN or ⏭ P. UP to select.

7. Press SET.
The REC indicator stops flashing and remains lit. The on-time, off-time, and Recording band ("TUNER FM" or "TUNER AM") appear on the display.
Turn the power off if you made the timer settings with the power turned on.

- A few seconds before the on-time for the recording, the Unit automatically turns on the power. When the on-time comes, recording starts using the selected source. A few seconds before the off-time, "OFF" flashes on the display. When the off-time comes, the power is automatically turned off.

Before the timer starts
- Check that tape direction is correct. This is important especially when Reverse Mode is off.
- Set Reverse Mode on if you want to record on both sides of the tape.
- The volume level is automatically set to 0 when Recording Timer starts.

It is very easy, and can be very disappointing, to forget to put in a tape, or to accidentally leave a tape in Deck B you don't want recorded over. Although this happens to almost everyone at one time or another, we hope it won't happen to you!

To change the Recording Timer setting
Repeat the setting procedure from the beginning.

Turning the Recording Timer On and Off

Once the Recording Timer has been used, the setting is maintained but the Timer is set to off.
To turn the Recording Timer off before the timer starts, press TIMER/CLOCK repeatedly until "REC" appears on the display, then press CANCEL/DEMO. "OFF" appears on the display and the REC indicator goes out.
To record at the same time again, press TIMER/CLOCK repeatedly until "REC" appears on the display, then press SET. The on-time, off-time, and Recording band ("TUNER FM" or "TUNER AM") appear on the display, and the REC indicator lights up.

CAUTION: If the Unit is unplugged, or a power failure occurs, the timer setting will be erased in a few days. If the settings are erased in this way, reset the timer settings.

Setting the Sleep Timer

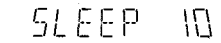
Use the Sleep Timer to turn the Unit off after a certain number of minutes when it is playing. By setting this timer, you can fall asleep to music and know your Unit will turn off by itself rather than play all night.

■ You can only set the Sleep Timer when the Unit is on and a source is playing.

To set the SLEEP Timer, follow this procedure:

SLEEP

1. With the Unit on and a source playing, press SLEEP on the Remote Control.
"SLEEP" appears on the display.



2. Set the length of time you want the source to play before shutting off.
- Each time you press this button while the "SLEEP" indicator is flashing, it changes the number of minutes shown on the display in this sequence:

→ 10 → 20 → 30 → 60 → 90 → 120 → Canceled → (back to the beginning)

When the number of minutes you want shows on the display, just wait 5 seconds until the indicator stops flashing, and remains lit.
The Unit is now set to turn off after the number of minutes you set.

To change the Sleep Timer setting
Press SLEEP until the number of minutes you want appears on the display.
To cancel the Sleep Timer setting
Press SLEEP until the SLEEP indicator goes out on the display.
Turning off the Unit also cancels the Sleep Timer.

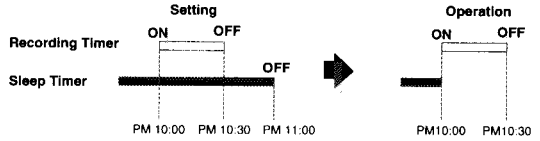
Timer Priority

Since each timer can be set independently, you may wonder what happens if the settings overlap. Here are the priorities for each timer:

■ The Recording Timer always has priority. This means that:
- If another timer is set to come on during a time when the Recording Timer is operating, the other timer just will not come on at all, so you will always get the entire program on tape.
- If the Recording Timer is set to come on while another timer is operating, the other timer will shut off 10 seconds before the Recording Timer is set to turn on, and the Recording Timer will then take over.

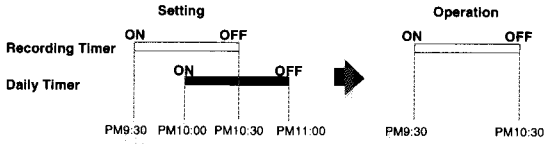
■ If the Sleep Timer is set while the Daily Timer is operating, the Sleep Timer will take over. However, if the Daily Timer is set to come while the Sleep Timer is operating, the Daily Timer will take over.

Example 1



The Recording Timer has priority.

Example 2



The Recording Timer has priority.

Care and Maintenance

Compact Discs

Handle your compact discs, cassette tapes, and Cassette Deck carefully, and they will last a long time.

- Remove the CD from the case by holding it at the edges while pressing the center hole lightly.
- Do not touch the shiny surface of the CD, or bend the CD.

- Put the CD back in its case after use to prevent warping.
- Be careful not to scratch the surface of the CD when placing it back in the case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.

- A dirty CD may not play correctly. If a CD does become dirty, wipe it with a soft cloth in a straight line from center to edge.

CAUTION: Do not use any solvent (for example, conventional record cleaner, spray thinner, benzine, etc.) to clean a CD.

Moisture Condensation

Moisture may condense on the lens inside the Unit in the following cases:

- After starting the heating in the room.
- In a damp room.
- If the Unit is brought directly from a cold to a warm place.

Should this occur, the Unit may malfunction. In this case, leave the Unit turned on for a few hours until the moisture evaporates, unplug the AC power cord, and then plug it in again.

General Notes

In general, you will have the best performance by keeping your tapes, CDs, and the mechanism clean.

- Store tapes and CDs in their cases, and keep them in cabinets or on shelves.
- Keep the Cassette Deck's tape doors and the CD trays closed when not in use.

Cassette Tapes

- If the tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating.
- If the tape is loose, it may get stretched, cut, or caught in the cassette.

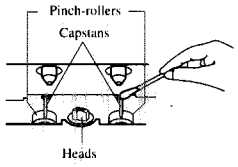
- Do not touch the tape surface.

- Do not store the tape:
  - In dusty places
  - In direct sunlight or heat
  - In moist areas
  - On a TV or speaker
  - Near a magnet

Cassette Deck

- If the heads, capstans, and pinch-rollers of the Cassette Deck become dirty, the following will occur:
  - Loss of sound quality
  - Discontinuous sound
  - Fading
  - Incomplete erasure
  - Difficulty recording

- Clean the heads, capstans, and pinch-rollers using a cotton swab moistened with alcohol.



- If the heads become magnetized, the Unit will produce noise or lose high frequencies.

- To demagnetize the heads, turn off the Unit, and use a head demagnetizer (available at electronics and record shops).

Troubleshooting

- If you are having a problem with your System, check this list for a possible solution before calling for service.
- If you cannot solve the problem from the hints given here, or the Unit has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Possible Cause	Action
No sound is heard.	Connections are incorrect, or loose.	Check all connections and make corrections. (See pages 4 - 6.)
Unable to record.	Cassette record protect tabs are removed.	Cover holes on back edge of cassette with tape.
Poor radio reception	• The antenna is disconnected. • The AM Loop Antenna is too close to the Unit. • The FM Wire Antenna is not properly extended and positioned.	• Reconnect the antenna securely. • Change the position and direction of the AM Loop Antenna. • Extend FM Wire Antenna to the best reception position.
The CD skips.	The CD is dirty or scratched.	Clean or replace the CD.
Unable to operate the Remote Control.	• The path between the Remote Control and the sensor on the Unit is blocked. • The batteries have lost their charge.	• Remove the obstruction. • Replace the batteries.
The CD tray cannot be opened.	The main AC power cord is not plugged in.	Plug in the AC power plug.
The CD does not play.	The CD is upside down.	Put the CD in with the label side up.
Operations are disabled.	The built-in microprocessor has malfunctioned due to external electrical interference.	Unplug the Unit then plug it back in.
The cassette door cannot be opened.	During tape playing, the power cord was unplugged.	Plug in the power cord, press POWER, and then press ⏏.

Specifications

CA-D602T

Amplifier Section

Output Power

Front **80 watts per channel, min. RMS at 6 ohms at 1 kHz, with no more than 3% total harmonic distortion.**

Center **25 watts min. RMS at 8 ohms at 1 kHz, with no more than 0.9% total harmonic distortion.**

Rear **12.5 watts per channel, min. RMS at 16 ohms at 1 kHz, with no more than 0.9% total harmonic distortion.**

Input Sensitivity/Impedance (1 kHz)
AUX 300 mV/50 kohms
Speaker terminals 6 - 16 ohms

Cassette Deck Section

Frequency Response
Type II (CrO_2) : 50 - 14,000 Hz
Type I (NORMAL) : 50 - 14,000 Hz
Wow And Flutter 0.15% (WRMS)

CD Automatic Changer Section

CD Capacity 3 discs
Dynamic Range 85 dB
Signal-To-Noise Ratio 90 dB
Wow And Flutter Unmeasurable

Tuner Section

FM Tuner
Tuning Range 87.5 - 108.0 MHz
AM Tuner
Tuning Range 530 - 1,710 kHz

Dimensions 265 × 315 × 340 mm (W/H/D)
(10-7/16 × 12-7/16 × 13-7/16 inches)
Mass 7.8 kg (17.2 lbs)

Accessories

AM Loop Antenna (1)
Remote Control (1)
Batteries R6P (SUM-3)/AA (15F) (2)
FM Wire Antenna (1)

Power Specifications

Power Requirements AC 120 V ∿, 60 Hz
Power Consumption 180 watts
16 watts (in standby mode)

Design and specifications are subject to change without notice.

SP-D602

Type 3-way, 3-speaker bass-reflex type (Magnetically-shielded type)
Speaker
Tweeter 2 cm (13/16 inches) dome × 1
Midrange 5 cm (2 inches) cone × 1
Woofer 16 cm (6-5/16 inches) cone × 1
Power Handling Capacity 80 W
Impedance 6 ohms
Frequency Range 46 - 20,000 Hz
Sound Pressure Level 87 dB/w • m

Dimensions 215 × 315 × 271 mm (W/H/D)
(8-1/2 × 12-7/16 × 10-11/16 inches)
Mass 3.3 kg (7.3 lbs)

SP-DS90

SP-DSC90 (Center Speaker)

Type Full range bass-reflex type (Magnetically-shielded type)
Speaker Full range 8 cm (3-3/16 inches) cone × 1
Power handling capacity 30 watts
Impedance 8 ohms
Frequency range 75 Hz - 20,000 Hz
Sound Pressure Level 83 dB/w • m

Dimensions 246 × 111 × 137 mm (W/H/D)
(9-11/16 × 4-3/8 × 5-7/16 inches)
Mass 0.75 kg (1.7 lbs)

SP-DSS90 (Rear Speaker)

Type Full range bass-reflex type
Speaker Full range 8 cm (3-3/16 inches) cone × 1
Power handling capacity 30 watts
Impedance 16 ohms
Frequency range 80 Hz - 20,000 Hz
Sound Pressure Level 82 dB/w • m

Dimensions 111 × 156 × 137 mm (W/H/D)
(4-3/8 × 6-3/16 × 5-7/16 inches)
Mass 0.6 kg (1.4 lbs)

Design and specifications are subject to change without notice.

QUALITY JVC SERVICE

HOW TO LOCATE YOUR JVC SERVICE CENTER

TOLL FREE : 1-800-537-5722

Dear customer:
In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, Call 1-800-537—5722 for your authorized servicer. Remember to retain you Bill of Sale for Warranty Service.

-JVC

JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.

FACTORY SERVICE CENTER LOCATIONS

107 Little Falls Road
Fairfield, NJ 07004-2105
(201) 808-9279

1500 Lakes Parkway
Lawrenceville, GA 30243-5357
(770) 339-2522

705 Enterprise Street
Aurora, IL 60504-8149
(630) 851-7855

5665 Corporate Avenue
Cypress, CA 90630-0024
(714) 229-8011

2969 Mapunapuna Place
Honolulu, HI 96819-2040
(808) 833-5828

10700 Hammerly, Suite 110
Houston, TX77043
(713) 935-9331

230 Eliot Street
Ashland, MA 0172-2377
(508) 881-5923

14505 Commerce Way
Miami Lakes, FL 33016-1512
(305) 362-6252

890 Dubuque Avenue
South San Francisco, CA 94080-1804
(415) 871-2666

Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is the key to maintaining the high level of performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.

NATIONAL HEADQUARTERS
JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.
107 Little Falls Road
Fairfield, NJ 07004-2105

If you ship the product • • •

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and the inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

Don't service it yourself.

CAUTION

To prevent electrical shock, do not open the cabinet. No user serviceable parts inside.
Refer servicing to qualified service personnel.

ACCESSORIES

To purchase accessories for your JVC product, you may contact your local JVC Dealer. Or from the 48 Continental United States call toll free . 800-882-2345

(0694)

JVC LIMITED WARRANTY AUDIO-1

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIAL AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period.")

PARTS	LABOR
1YR	1YR

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY(50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN COMMONWEALTH OF PUERTO RICO.

WHAT WE WILL DO:

If this product is found to be defective, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis except for Television sets having a screen size 25 inches and above which are covered on an in-home basis.

WHAT YOU MUST DO FOR WARRANTY SERVICE:

Return your product to a JVC authorized service center with a copy of your bill of sale. For your nearest JVC authorized service center, please call toll free: (800)537-5722.
If service is not available locally, box the product carefully, preferably in the original carton, and ship, insured, with a copy of your bill of sale plus and letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location of which will be given to you by the toll-free number.
If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

WHAT IS NOT COVERED:

This limited warranty provided by JVC does not cover:

1. Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model or serial number has been altered, tampered with, defaced or removed;
2. initial installation and installation and removal for repair;
3. Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
4. Damage that occurs in shipment, due to act of God, and cosmetic damage;
5. Signal reception problems and failures due to line power surge;
6. Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus(Needle) are covered for 90 days from the date of purchase;
7. Accessories;
8. Batteries (except the Rechargeable Batteries are covered for 90 days from the date of purchase);

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MARCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR THE LOSS OF USE THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long an implied warranty last, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

JVC COMPANY OF AMERICA
DIVISION OF US JVC CORP.

41 Slater Drive
Elmwood Park, New Jersey 07407

REFURBISHED PRODUCTS CARRY A SEPARATE WARRANTY. THIS WARRANTY DOES NOT APPLY. FOR DETAILS OF REFURBISHED PRODUCT WARRANTY, PLEASE REFER TO THE REFURBISHED PRODUCT WARRANTY INFORMATION PACKAGED WITH EACH REFURBISHED PRODUCT.

For customer use:

Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No.: _____ Serial No.: _____

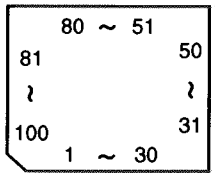
Purchase date: _____ Name of dealer: _____

JVC
VICTOR COMPANY OF JAPAN, LIMITED

Description of Major ICs

■UPD780206GF-039 (IC801) : System control micon

1.Terminal Layout

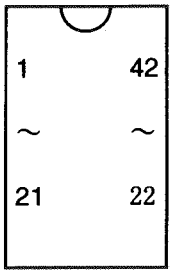


2.Pin Function

No.	Symbol	I/O	Function	No.	Symbol	I/O	Function
1	VDD	-	Power supply.	33	SPIDTI	I	SPI DATA analog signal input.
2	SPICSB	O	SPI IC chip select signal output.	34	AVDD	-	Power supply for AD converter.
3	SPIA	O	SPI IC control-A.	35	AVREF	-	A/D REF voltage.
4	SPIB	O	SPI IC control-B.	36	$\overline{\text{REMIN}}$	I	Remote control signal input.
5	PHOTOA	I	Tape A mechanism running detection.	37	$\overline{\text{MPX}}$	I	MPX IN (Stereo INDI.)
6	PHOTOB	I	Tape B mechanism running detection.	38	$\overline{\text{OSDCK/RDCK}}$	I/O	OSD clock output or RDS clock input.
7	MSI	I	Music scan input.				
8	SPIC	O	SPI IC control-C	39	$\overline{\text{PRT}}$	I	Protector input.
9	BEAT	O	Beat cut output (TUNER).	40	VSS	-	Connect to GND.
10	$\overline{\text{RESET}}$	I	System reset signal.	41	$\overline{\text{INH}}$	I	Inhibit signal input (Back up).
11	X2	O	Main clock 4.19MHz.	42	HPHONE	I	Headphone input.
12	X1	I	Main clock 4.19MHz.	43	OSDDA/RSDA	I/O	OSD data output or RDS data input.
13		-	Non connect.				
14	XT2	-	Sub clock 32.76kHz.	44	PROSACK	O	Prologic/SA Bass/EXT IC clock.
15	XT1	-	Sub clock 32.76kHz.	45	PROSADA	O	Prologic/SA Bass/EXT IC data.
16	VDD	-	Power supply.	46	VDD	-	Power supply.
17	CK	O	Serial clock signal output to IC304 IC303,IC802,IC2.	47	FVOLDA	O	Front VOL data output to IC401.
				48	VOLCK	O	Clock signal output to IC401.
18	DATA	I/O	Serial data signal output to IC304 IC303,IC802,IC2.	49	RVOLDA	O	Rear VOL data output.
				50	OSDOFF	I	OSD OFF.
19	POUT	O	Power ON/Standby.	51	SLCCE	O	Chipenable signal output to IC303,IC304.
20	VC3RESET	O	Reset signal output to IC251.				
21	MRDY	I	Ready signal from IC251.	52	TUCE	O	Chip enable signal to Tuner (IC2).
22	KCLK	I	Clock signal from IC251.	53	PROCE	O	Chip enable signal to prologic.
23	KCMND	O	Command to IC251.	54	SABCE	O	Chip enable signal to SA Bass.
24	MSTAT	I	VC3 MSTAT.	55	OSDCE	O	Chip enable signal to OSD.
25	AVSS	-	Connect to GND.	56	DSPCE	O	Chip enable signal to DSP.
26	KEY1	I	Key matrix signal input.	57	EXTCE	O	Chip enable signal to EXT(IC802).
27	KEY2	I	Key matrix signal input.	58	SMUTE	O	System mute output.
28	KEY3	I	Key matrix signal input.	59	VOLU+	I	Rotary encoder VOL +
29	KEY4	I	Key matrix signal input.	60	VOLU-	I	Rotary encoder VOL -
30	SLCKEY1	I	SLC Key input	61~78	S1~S18	O	FL segmant control signal.
31	SLCKEY2	I	SLC Key input	79	VLOAD	-	Power supply.
32	SLCKEY3	I	SLC Key input	80~91	S19~S30	O	FL segment control signal.
				92~100	G9~G1	O	FL grid control signal.

■ LA2786 (IC501) : Dolby Pro Logic Surround Signal Processor

1. Terminal Layout

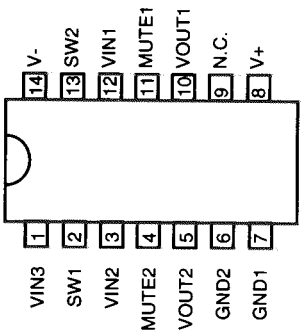


2. Pin Functions

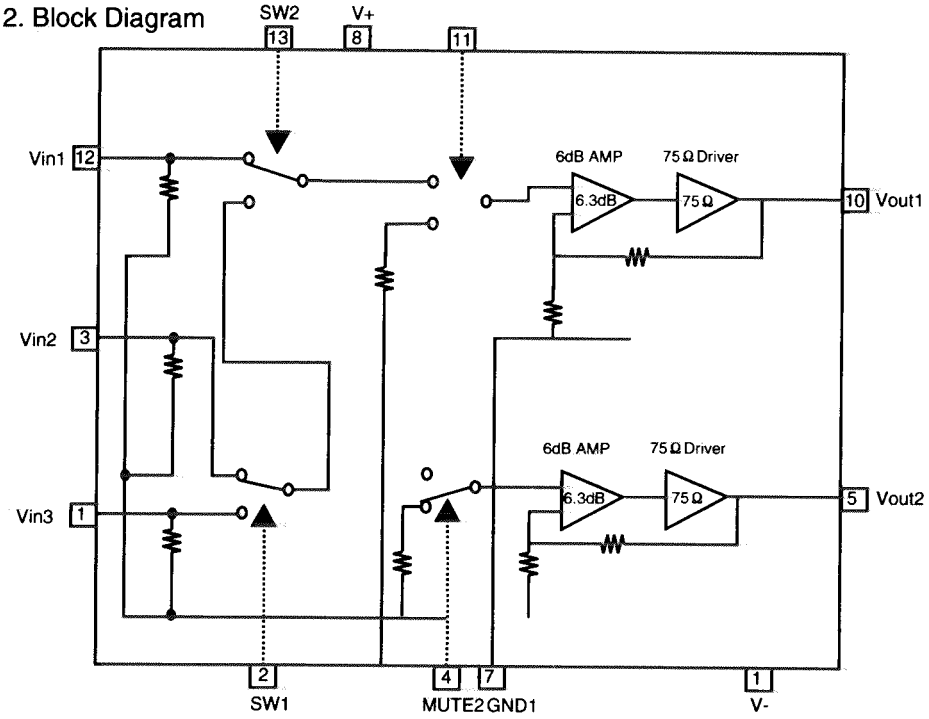
Pin No	Symbol	I/O	Function	Pin No	Symbol	I/O	Function
1	NS-BPF1	--	Capacitor for spectrum in noise sequencer	22	VCS-1	--	Capacitor for time constant (in log defferential area)
2	NS-BPF2	--	Capacitor for spectrum in noise sequencer	23	VCS-2	--	Capacitor for time constant (in log defferential area)
3	VREF	--	Analog reference voltage	24	VCS-TH	--	Capacitor for time constant (in log defferential area)
4	S-DC-OUT	--	Capacitor for DC-cut Sch	25	L+R RECT	--	Capacitor for Center Channel detection
5	C-DC-OUT	--	Capacitor for DC-cut Cch	26	DC-CUT	--	Capacitor for DC-cut at detection circuit
6	L-DC-OUT	--	Capacitor for DC-cut Lch	27	L-R RECT	--	Capacitor for Surround channel detection
7	R-DC-OUT	--	Capacitor for DC-cut Rch	28	DC-CUT	--	Capacitor for DC-cut at detection circuit
8	VREF BUFFER	--	VREF low impedance	29	R-BPF3	--	LPF,HPF for Lch Right channel control circuit
9	L-IN	I	Left channel signal input	30	R-BPF2	--	LPF,HPF for Lch Right channel control circuit
10	R-IN	I	Ground	31	R-BPF1	--	LPF,HPF for Lch Right channel control circuit
11	GND	--	LPF,HPF for Lch control	32	C-TRIM DC-CUT	--	Capacitor for DC-cut Center Channel
12	L-BPF1	--	LPF,HPF Left channel control circuit	33	C-MODECAP8	--	Capacitor for Center Channel output low pass filter
13	L-BPF2	--	LPF,HPF Left channel control circuit	34	C-OUT	O	Center signal output
14	L-BPF3	--	LPF,HPF Left channel detection	35	S-OUT	O	Surround signal output
15	DC-CUT	--	Capacitor for DC-cut at detection circuit	36	R-OUT	O	Right channel signal output
16	R RECT	--	Capacitor Right channel detection	37	L-OUT	O	Left channel signal output
17	DC-CUT	--	Capacitor for DC-cut at detection circuit	38	Vcc	--	Power supply
18	L RECT	--	Capacitor for Left channel detection	39	OSC	--	Oscillation for noise sequencer and auto balance
19	VLR-TH	--	Capacitor for time constant (in log differential area)	40	STB	I	Strobe signal input
20	VLR-2	--	Capacitor for time constant (in log defferential area)	41	DATA	I	Serial interface data input
21	VLR-1	--	Capacitor for time constant (in log defferential area)	42	CLK	I	Serial interface clock

■ LV1016 (IC541) : Dolby Surround Passive Decoder

1. Terminal Layout

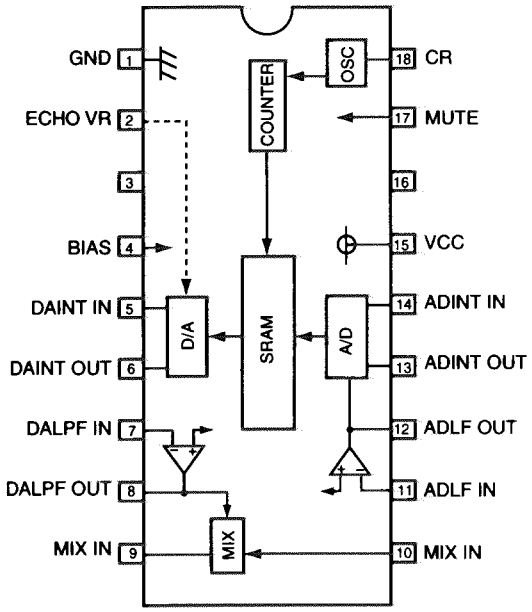


2. Block Diagram



■ BU9253AS (IC201) : Echo Mixing

1.Block Diagram

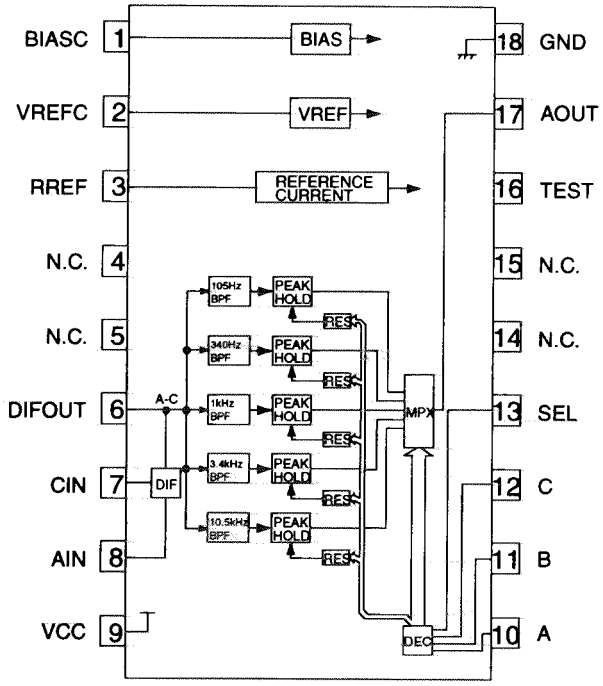


2.Pin Function

Pin No.	Symbol	I/O	Function
1	GND	-	Ground pin
2	ECHO VR Echo	I	Echo level control
3	NC1	-	Non connection
4	BIAS	-	Analog part DC bias
5	DAINT IN	I	DA side Integrator input
6	DAINT OUT	O	DA side integrator output
7	DALPF IN	I	DA side LPF input
8	DALPF OUT	O	DA side LPF output
9	MIX OUT	O	Mix AMP input pin for original tone
10	MIX IN	I	Mix AMP input pin for original tone
11	ADLPF IN	I	AD side LPF input
12	ADLPF OUT	O	AD side LPF output
13	ADINT OUT	O	AD side Integrator output
14	ADINT IN	I	AD side integrator input
15	VCC	-	VCC pin
16	NC2	-	Non connection
17	MUTE	I	Mute control
18	CR	-	CR pin for Oscillator

■ BA3835S (IC542) : SPI B.P.F.

1.Block Diagrams

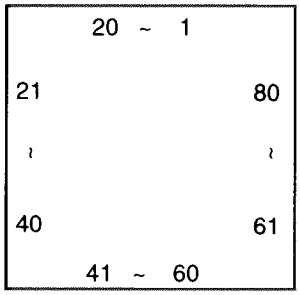


2.Pin Function

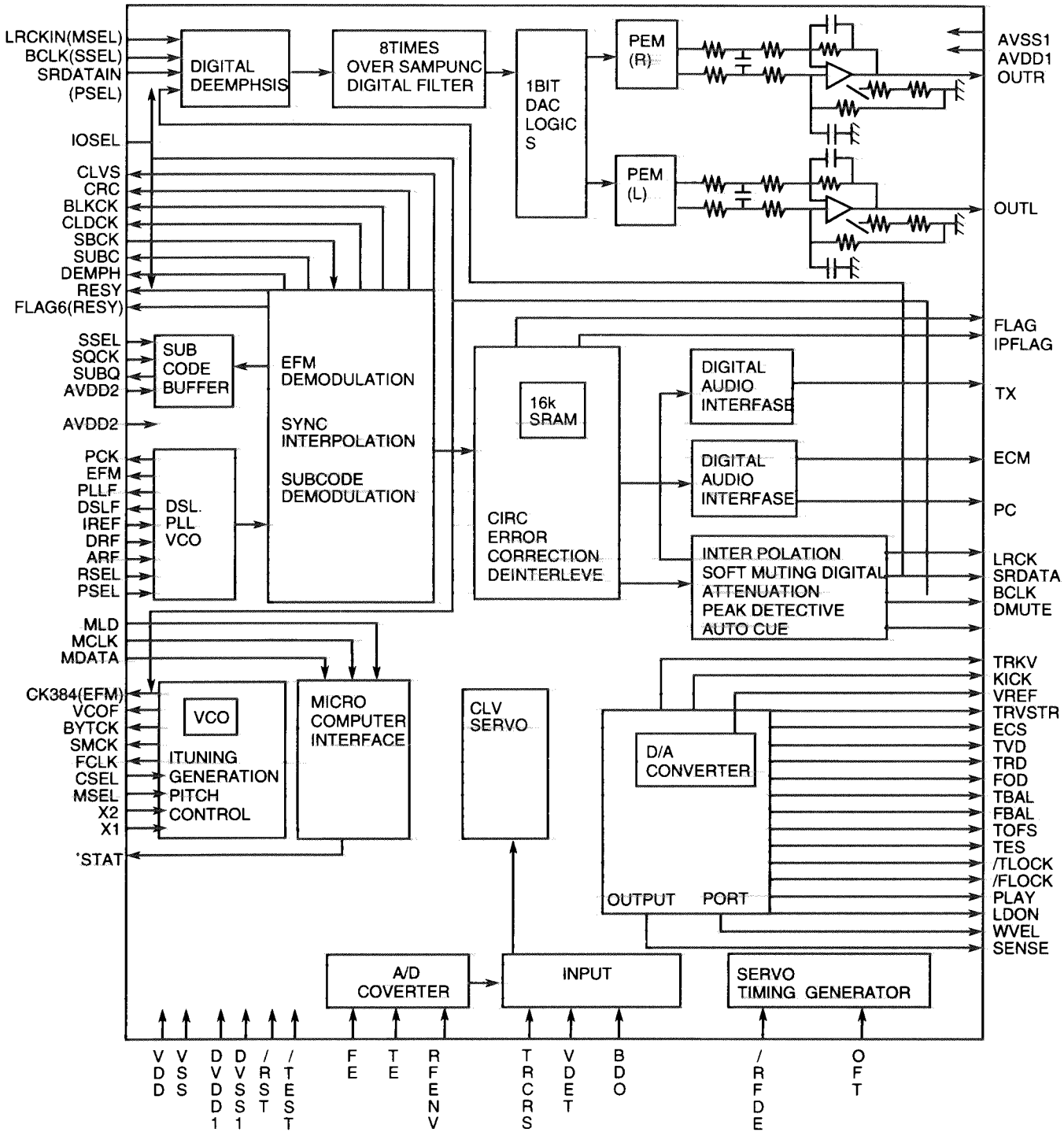
No.	Symbol	I/O	Function
1	BIASC	-	Decoupling condenser connection terminal.
2		-	Decoupling condenser connection terminal.
3		-	Reference resistance connection terminal.
4	NC	-	Non connect.
5	NC	-	Connected to GND of audio system through a condenser.
6	DIF OUT	-	Non connect.
7	CIN	-	Connected to GND of audio system through a condenser.
8	AIN	I	Inputs the audio signal through a condenser.
9	VCC	-	Power supply terminal.
10	SPI-A	O	Output selection control terminal.
11	SPI-B	O	Output selection control terminal.
12	SPI-C	O	Output selection control terminal.
13	SPICSB	O	Output selection control terminal.
14	NC	-	Non connect.
15	NC	-	Non connect.
16	TEST	-	Connected to GND upon normal use.
17	AOUT	O	Multi-plexor output terminal.
18	GND	-	Connect to GND.

■ MN35510 (IC651) : DIGITAL SERVO&DIGITAL SIGNAL PROCESSER

1. Terminal Layout



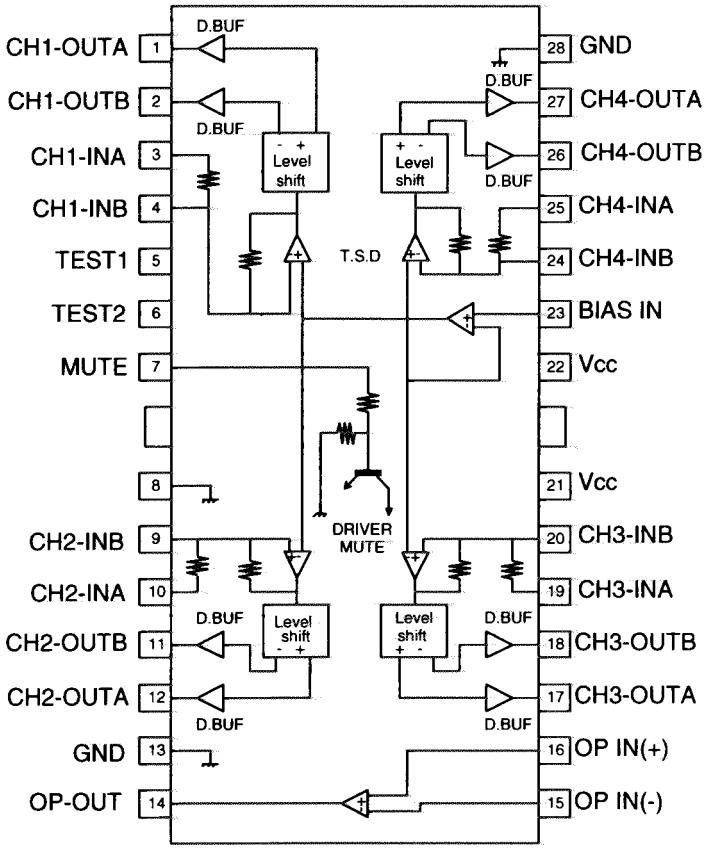
2.Block Diagram



3. Description

Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Not used	41	TES	O	Tracking error shunt signal output(H:shunt)
2	LRCK	O	Not used	42	PLAY	–	Not used
3	SRDATA	O	Not used	43	WVEL	–	Not used
4	DVDD1	–	Power supply (Digital)	44	ARF	I	RF signal input
5	DVSS1	–	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface output	46	DRF	I	Bias pin for DSL
7	MCLK	I	μcom command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	μcom command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	μcom command load signal input	49	VCOF	–	Not used
10	SENSE	O	Sence signal output	50	AVDD2	–	Power supply(Analog)
11	FLOCK	O	Focus lock signal output Active :Low	51	AVSS2	–	Connected to GND(Analog)
12	TLOCK	O	Tracking lock signal output Active :Low	52	EFM	–	Not used
13	BLKCK	O	sub-code·block·clock signal output	53	PCK	–	Not used
14	SQCK	I	Outside clock for sub-code Q resister input	54	PDO	–	Not used
15	SUBQ	O	Sub-code Q -code output	55	SUBC	–	Not used
16	DMUTE	–	Connected to GND	56	SBCK	–	Not used
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	–	Connected to GND(for X'tal oscillation circuit)
18	RST	I	Reset signal input (L:Reset)	58	XI	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	–	Not used	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	–	Not used	60	VDD	–	Power supply(for X'tal cscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	–	Not used
22	TVD	O	Traverse drive output	62	CLDCK	–	Not used
23	PC	–	Not used	63	FLAG	–	Not used
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	–	Not used
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	–	Not used
26	KICK	O	Kick pulse output	66	CLVS	–	Not used
27	TRD	O	Tracking drive output	67	CRC	–	Not used
28	FOD	O	Focus drive output	68	DEMPH		Not used
29	VREF	I	Reference voltage input pin for D/A output block (TVD,FOD,FBA,TBAL)	69	RESY	–	Not used
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	–	pull up
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	–	pull up
32	FE	I	Focus error signal input(Analog input)	72	AVDD1	–	Power supply(Digital)
33	TE	I	Tracking error signal input(Analog input)	73	OUT L	O	Lch audio output
34	RF ENV	I	RF envelope signal input(Analog input)	74	AVSS1	–	Connected to GND
35	VDET	I	Vibration detect signal input(H:detect)	75	OUT R	O	Rch audio output
36	OFT	I	Off track signal input(H:off track)	76	RSEL	–	pull up
37	TRCRS	I	Track cross signal input	77	CSEL	–	Connected to GND
38	RFDET	I	RF detect signal input(L:detect)	78	PSEL	–	Connected to GND
39	BDO	I	BDO input pin(L:detect)	79	MSEL	–	Connected to GND
40	LDON	O	Laser ON signal output(H:on)	80	SSEL	–	Pull up

■ BA6897FP (IC801) : 4channel driver

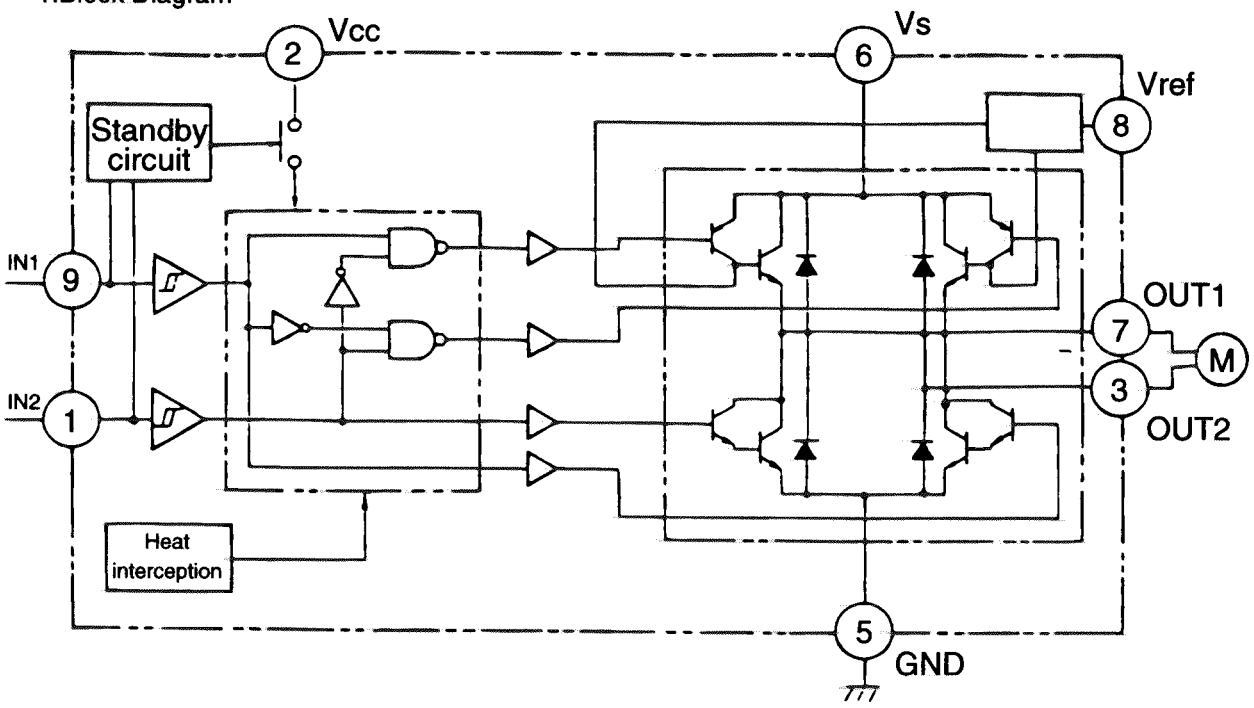


3. Functions

Pin No.	Symbol	I/O	Functions and operations
1	PD	I	APC amp input terminal
2	LD	O	APC amp output terminal
3	LD ON	I	APC ON/OFF control terminal
4	LDP	--	Connect to ground
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RFamp output
8	RF IN	I	RF input
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	RF output
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of RF signal
16	OFTR	O	Of-track status signal output
17	/NRFDET	O	RF detection signal output
18	GND	--	Ground
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output
21	LD OFF	--	Connect to ground
22	VDET	O	Vibration detection signal output
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output
25	TE OUT	O	Tracking error signal output
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control
30	TBAL	I	Tracking balance control
31	PDFR	I/O	F I-V amp gain control
32	PDER	I/O	E I-V amp gain control
33	PDF	I	I-V amp input
34	PDE	I	I-V amp input
35	PD BD	I	I-V amp input
36	PD AC	I	I-V amp input

■ TA8409S (IC851.852) : CD Changer Motor Driver

1.Block Diagram

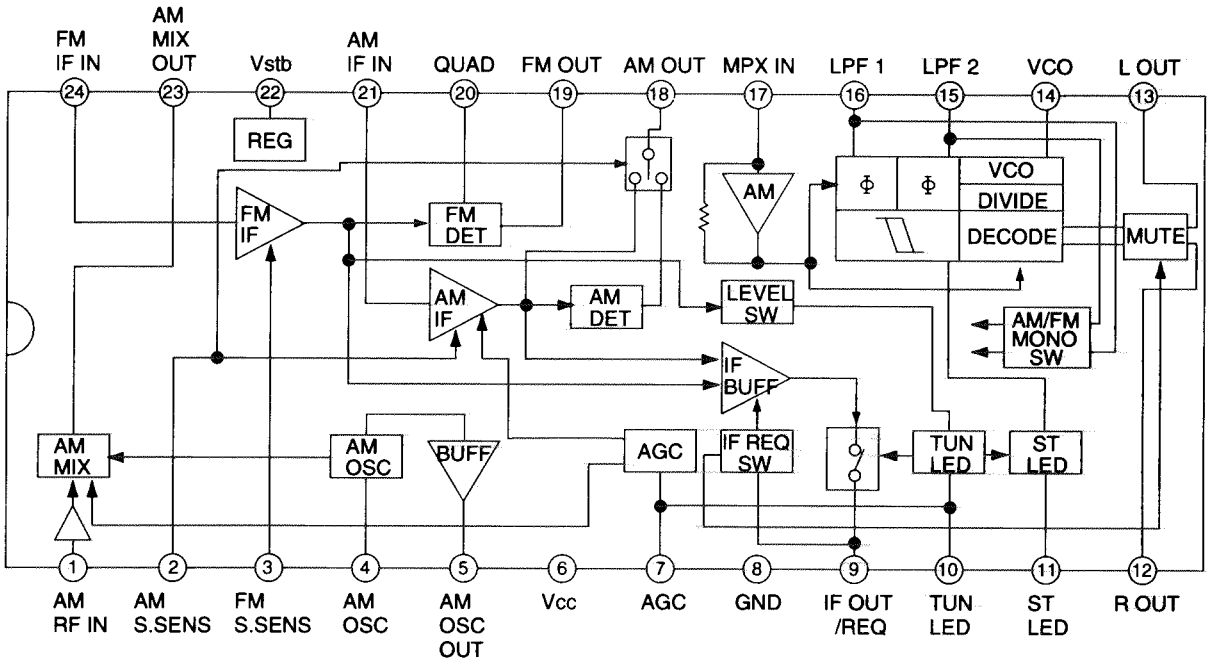


2.Function

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	MOTOR
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

■ TA2057N (IC1) : FM/AM IF AMP & Detector

1.Block Diagrams

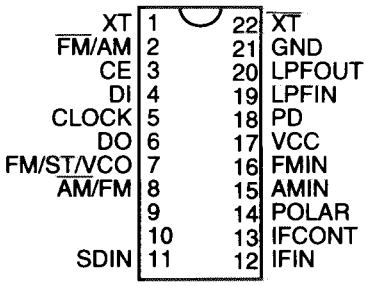


2.Pin Function

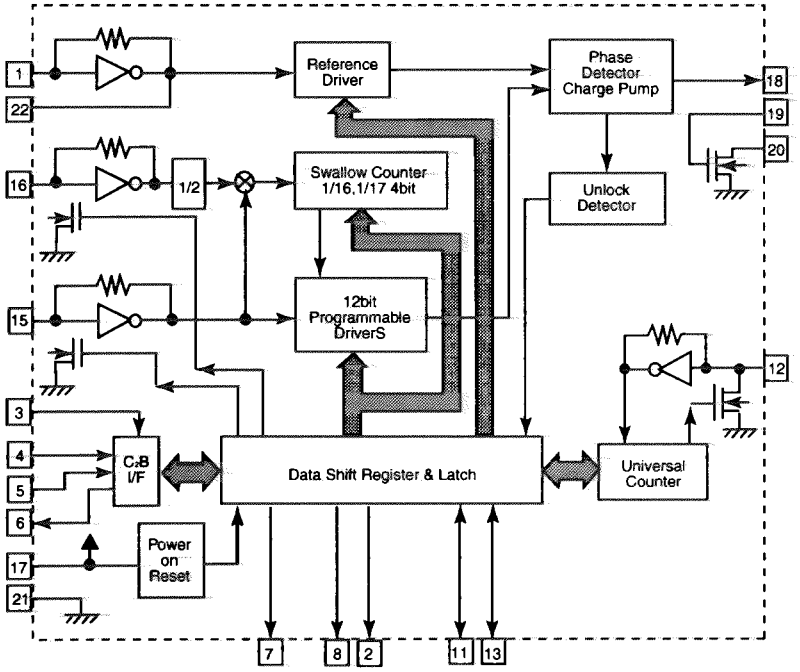
Pin No.	I/O	Symbol	Function	Pin No.	I/O	Symbol	Function
1	I	AM RF	AMRF signal input	13	O	Lch OUT	Output Lch
2		AM S.SENS		14	O	VCO	Voltage controlled terminal
3		FM S.SENS		15	O	LPF2	When voltage of terminal is MONO at "H" and ST at "L"
4	-	AM OSC	AM local oscillation circuit				
5	O	AM OSC OUT	AM local oscillation signal output	16	O	LPF1	When voltage of terminal is AM at "H" and FM at "L"
6	-	VCC	Power supply				
7	I	AGC	AGC voltage input terminal	17	I	MPX IN	Multi plex signal input
8	-	GND	Connect to GND	18	O	AM OUT	AM detection signal output
9	O	IF OUT	IF REQ signal output to IC2	19	O	FM OUT	FM detection signal output
10	O	TU IND	Indicator drive output when tuning	20	I	FM QUAD	Bypass to FMIF
11	O	ST IND	Stereo indicator output "H"mono . "L"stereo	21	I	AM IF IN	Input of AMIF signal
				22	-	Vst	Fixed voltage output terminal
12	O	Rch OUT	Output Rch	23	O	AM MIX OUT	Output terminal for AM mixer
				24	I	FM IF IN	Input of FMIF signal

■ LC72136N (IC2) : PLL Frequency sinsesizer LSI

1. Layout



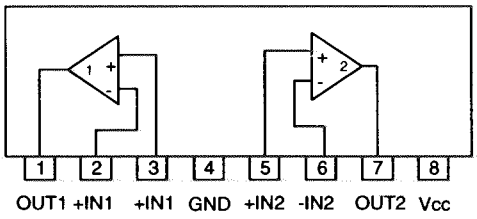
2. Block



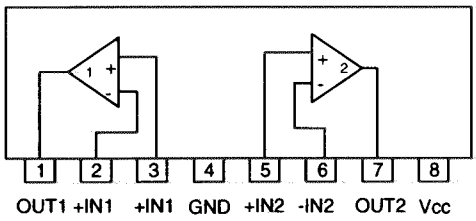
3. Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75KHz)	12	IFIN	I	IF counter signal input
2	$\overline{FM}$/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14	POLAR	O	FM High Band:Low FM Low Band(Auto):High (Mono):Low
4	DI	I	Input for receive the sirisl data from controller	15	AMIN	I	AM Local OSC signal output
5	CLOCK	I	Sync signal input use	16	FMIN	I	FM Local OSC signal input
6	DO	O	Data output for Controller Output port	17	VCC	-	Power suplly(VDD=4.5~5.5V) When power ON:Reset circuit move
7	FM/ST/VCO	O	"Low": MW mode	18	PD	O	PLL charge pump output(H: Local OSC frequency Height than Reference frequency. L: Low Agreement: Height impedance)
8	$\overline{AM}$/FM	O	Not use	19	LPFIN	I	Input for active lowpassfilter of PLL
9		-	Not use	20	LPFOUT	O	Output for active lowpassfilter of PLL
10		-	Input/output port	21	GND	-	Connected to GND
11	SDIN	I/O	Data input/output	22	$\overline{XT}$	I	X'tal oscillator(75KHz)

■ BA15218 (IC7, IC402, IC403, IC405, IC407, IC562) : Dual Ope Amp

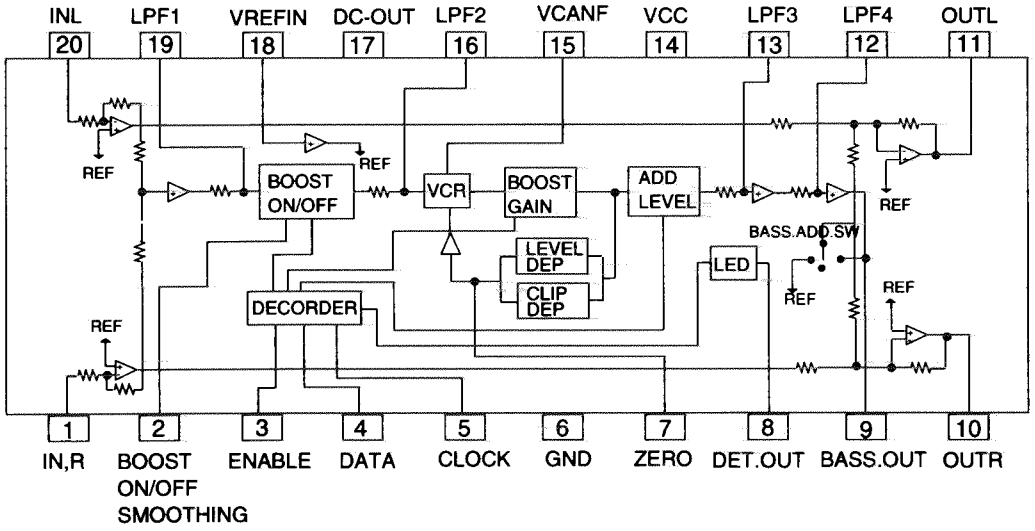


■ BA15218N (IC202) : Dual Ope Amp

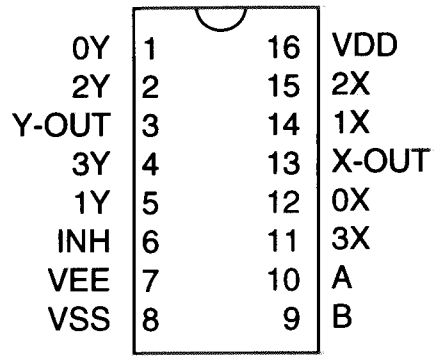


■ LA2650 (IC406) : SA BASS

1.Terminal Layout / Block diagram



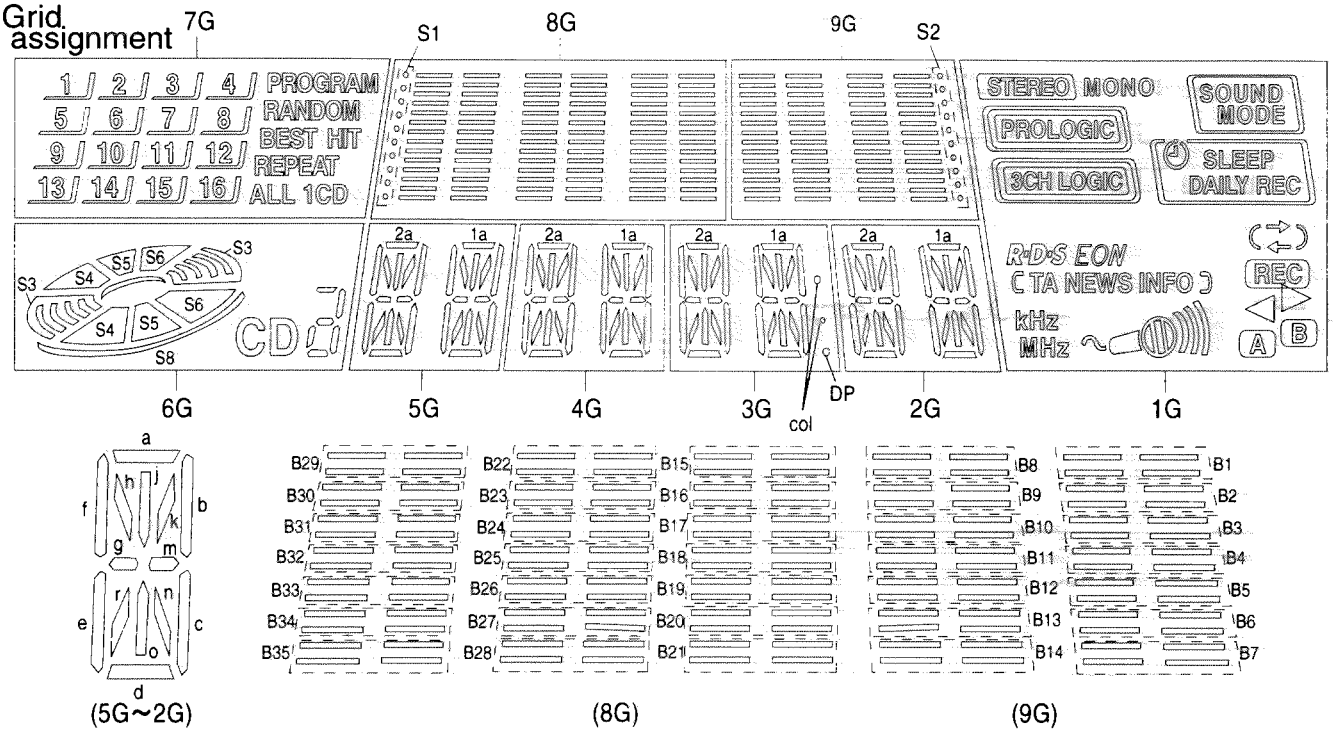
■ TC4052BP (IC404) : Multipllexer



INHIBIT	B	A	X-OUT	Y-OUT
L	L	L	0X	0X
L	L	H	1X	1X
L	H	L	2X	2X
L	H	H	3X	3X
L	L	L	-	-
L	L	H	-	-
L	H	L	-	-
L	H	H	-	-
H	*	*	NONE	NONE

FL Tube

Grid assignment



(5G~2G) (8G) (9G)

Anode connection

	9G	8G	7G	6G	5G,4G	3G	2G	1G
P1	B1	B15	1	S3	2a	2a	2a	STEREO
P2	B2	B16	2	S4	2h	2h	2h	PROLOGIC
P3	B3	B17	3	S5	2j	2j	2j	
P4	B4	B18	4	S6	2k	2k	2k	
P5	B5	B19	5	S7	2b	2b	2b	3CH LOGIC
P6	B6	B20	6	S8	2f	2f	2f	REC
P7	B7	B21	7	CD	2m	2m	2m	
P8	-	-	8	d	2g	2g	2g	SLEEP
P9	-	B29	9	e	2c	2c	2c	DAILY
P10	-	B30	10	c	2e	2e	2e	SOUND MODE
P11	-	B31	11	g	2r	2r	2r	
P12	-	B32	12	b	2p	2p	2p	
P13	-	B33	RANDOM	a	2n	2n	2n	
P14	-	B34	BEST HIT	-	2d	2d	2d	kHz
P15	-	B35	REPEAT	-	-	col	-	MHz

	9G	8G	7G	6G	5G,4G	3G	2G	1G
P16	-	-	-	-	-	Dp	-	REC
P17	B8	B22	13	-	1a	1a	1a	TA
P18	B9	B23	14	-	1h	1h	1h	R·D·S
P19	B10	B24	15	-	1j	1j	1j	EON
P20	B11	B25	16	-	1k	1k	1k	NEWS
P21	B12	B26	ALL	-	1b	1b	1b	INFO
P22	B13	B27	1	-	1f	1f	1f	((TA)
P23	B14	B28	CD	-	1m	1m	1m	(INFO))
P24	S2	S1	PROGRAM	-	1g	1g	1g	( )
P25	-	-	-	-	1c	1c	1c	⇄
P26	-	-	-	-	1e	1e	1e	▷
P27	-	-	-	-	1r	1r	1r	◁
P28	-	-	-	-	1p	1p	1p	A
P29	-	-	-	-	1n	1n	1n	B
P30	-	-	-	-	1d	1d	1d	MONO

Pin connection

PIN No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
CONNECTION	F1	F1	NP	NP	NX	NX	NX	P09	P08	P07	P06	P05	P04	P03	P02	P01	P30	P29	P28	P27	P26	P25	P24	P23	P22	P21	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	P54	P53	P52	P51	P50	P49	P48	P47	P46	P45	P44	P43	P42	P41	P40	P39	P38	P37	P36	P35	NP	NP	F2	F2

NOTE 1) F1,F2 Filament
2) NP No pin
3) NX No extend pin
4) DL Datum Line
5) 1G~9G Grid
6) Field of vision is a minimum of 33.8° from the upper side, 23.9° from the lower side

Disassembly Procedures

■ Removal of the Metal Cover

1. Remove the six screws A fastening the metal cover to the rear panel of the main unit.
2. Remove the two screws B fastening the metal cover to the side panel of the main unit.
3. Spread both side of the metal cover outward and remove from the back panel by lifting upward.

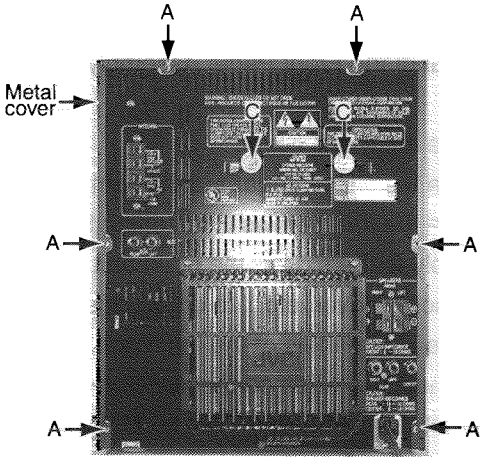


Fig 1

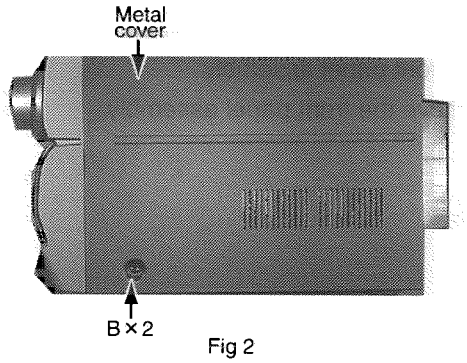


Fig 2

■ Removal of the CD Changer Mechanism Assembly

1. Remove the metal cover
2. Remove the two screws C fastening the CD changer mechanism assembly to the rear panel of the main unit. (See Fig.1)
3. Remove the two screws D fastening the CD changer mechanism assembly to the top panel of the main unit.
4. Disconnect the card wire connected from the CD changer mechanism assembly to connectors CN410 on the main amplifier board on the right side of the main unit.
5. Expand a rear panel outside, back of CD changer mechanism is lifted and detached.

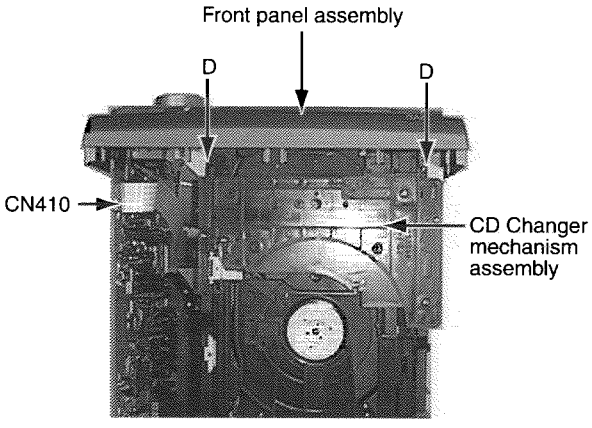


Fig 3

■ Removal of the Front Panel Assembly

1. Remove the metal cover.
2. Remove the CD changer mechanism assembly.
3. Remove the four screws E fastening the front panel assembly to the side of the main unit.
4. Use a screwdriver, etc.., to disengage clips ⓐ and ⓑ from the side panels of the main unit.
5. Disconnect the wires connected from the front panel assembly to connectors CN411, CN412 and CN413 on the main amplifier board.
6. Disconnect the wires CN915 and CN007 on the power amplifier board.
8. Disconnect connector CN414 on the Main P. C. Board
9. Remove the plastic rivet ⓒ fastening the main P. C. Board and front panel assembly.
10. Remove the front panel assembly.

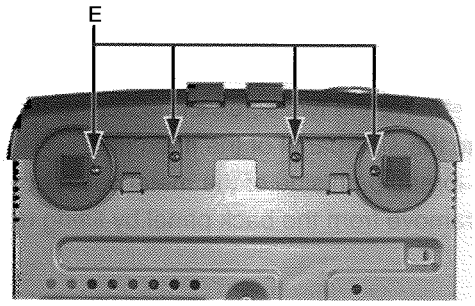


Fig 4

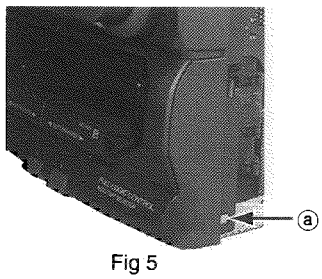


Fig 5

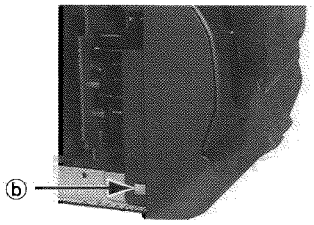


Fig 6

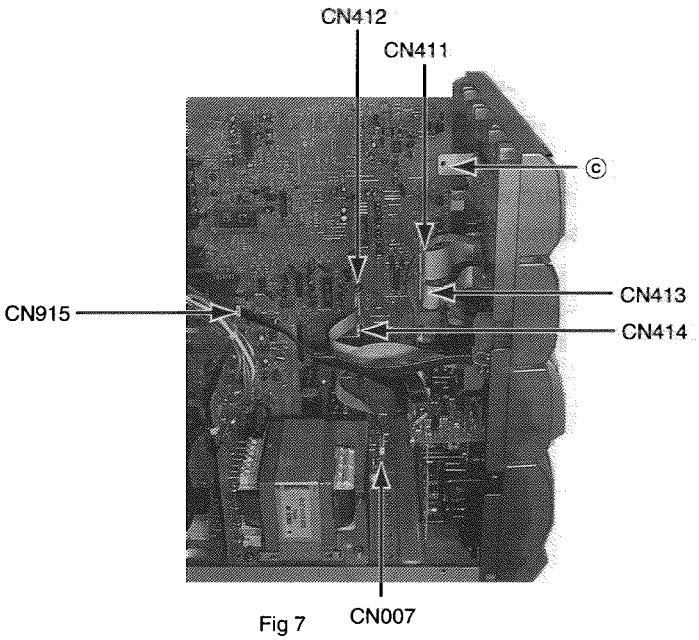


Fig 7

■ Removal of the Rear Panel Assembly

1. Remove the metal cover.
2. Remove the CD changer mechanism assembly.
3. Remove seven screws F fastening the rear panel.
4. Remove two screws G fastening the rear cover.
5. Remove one screw H fastening the pin jack of the rear panel.
6. Remove three screws I fastening the heat sink of the rear panel.
7. Use a screwdriver, etc., to disengage the two engagements bottom chassis clips ⓓ and ⓔ from the bottom part of the side panels of the rear panel assembly.

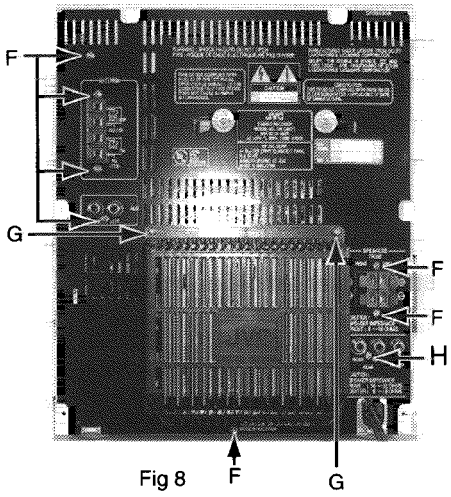


Fig 8

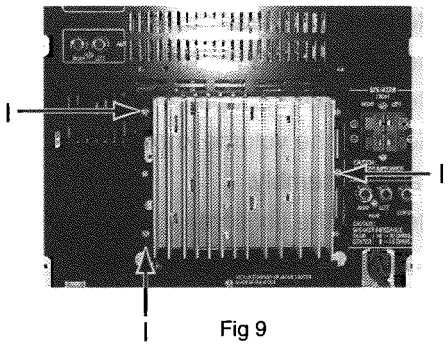


Fig 9

■ Removal of the Main Amplifier Board

1. Remove the rear panel.
2. Remove one screw J fastening the main amplifier board and bottom chassis to the side panel of the main unit.
3. Disconnect the main amplifier board CN415 and CN006 from the power amplifier board.

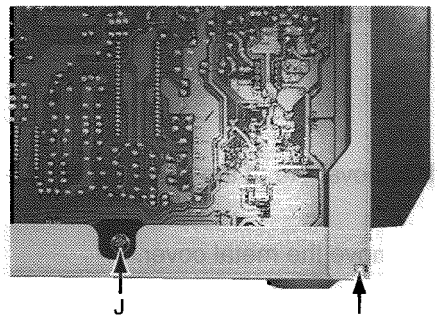


Fig 10

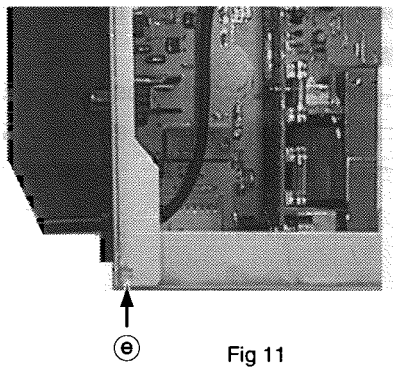


Fig 11

■ Remove of the Power Transformer

1. Remove the metal cover.
2. Remove the CD changer mechanism assembly.
3. Remove the rear panel .
4. Remove the four screws K fastening the power transformer.
5. Disconnect the connector CN111 and CN009 on the power amplifier board.

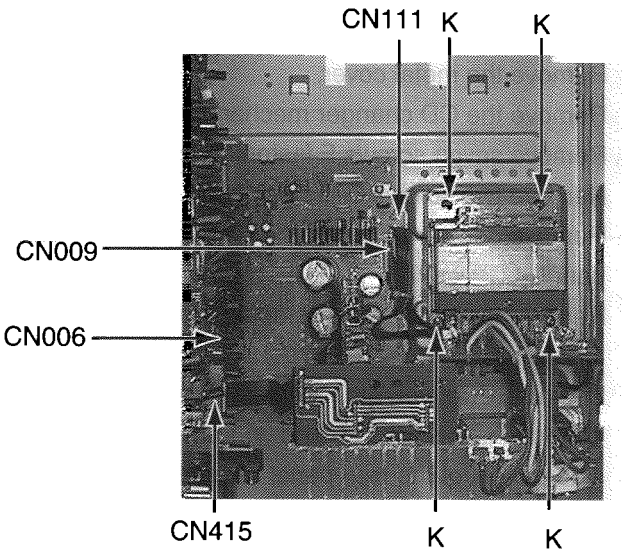


Fig 12

■ Removal of the Front Panel

1. Remove the metal cover.
2. Remove the CD changer mechanism assembly.
3. Remove the front panel assembly.
4. Remove the volume knob and nut on the front panel assembly.
5. Remove the six screws L fastening the stay bracket inside the front panel assembly.
6. Remove the eleven screws M fastening the system CPU board.
7. Disconnect the card wires protruding from connector CN803 on the system CPU board.

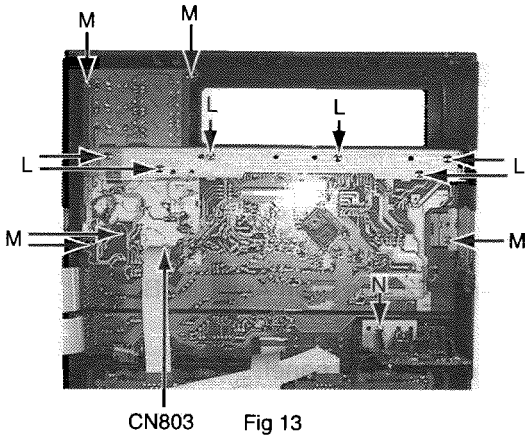


Fig 13

■ Removal the of the Cassette Mechanism Assembly.

1.Remove the metal cover.
2.Remove the CD traverse mechanism assembly.
3.Remove the front panel assembly.
4.Remove the eight screws N fastening the cassette mechanism assembly to the inside of the front panel assembly.
5.Disconnect the card wires from connectors CN305 and CN306 on the head amplifier & mechanism control board.

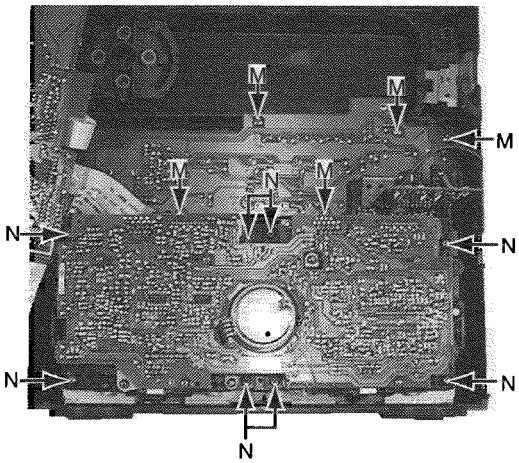


Fig 14

≪CD Changer Mechanism Type:VC3 Section≫

■Removing the CD Servo control board (See Fig.1)

1.Remove the metal cover.
2.Remove the CD changer mechanism assembly.
3.From bottom side the CD changer mechanism assembly, remove the two screws 1 retaining the CD servo control board.
4.Absorb the four soldered positions "M" of the right and left motors with a soldering absorber.
5.Pull out the earth wire on the CD changer mechanism assembly.
6.The two screws A is removed and C.B.holder is detached.
7.Disconnect the connector CN854 on the CD servo control board.
8.Disconnect the card wire CN601 and the connector CN801 on the CD servo control board.

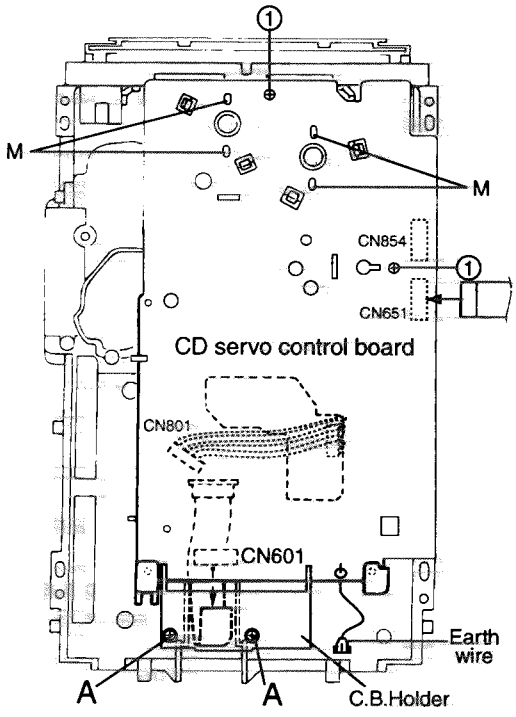


Fig.1

■Removing the CD tray assembly (See Fig.2~4)

1. Remove the front panel assembly.
2. Remove the CD changer mechanism assembly.
3. Remove the CD Servo control board.
4. From the T.bracket section "B" and clamper base section "C" , remove both of the edges fixing the rod(See Fig.2 and 3).
5. Remove the screw 2 retaining the Disc stopper (See Fig.3).
6. Remove the three screws 3 retaining the T.bracket (See Fig.3).
7. Remove the screws 4 retaining the clamper assembly (See Fig.3).
8. From the left side face of the chassis assembly, remove the one screw 5 retaining both of the return spring and lock lever(See Fig. 4).
9. By removing the pawl at the section "D" fixing the return spring, dismount the return spring(See Fig.4).
10. Remove the three lock levers(See Fig.4).

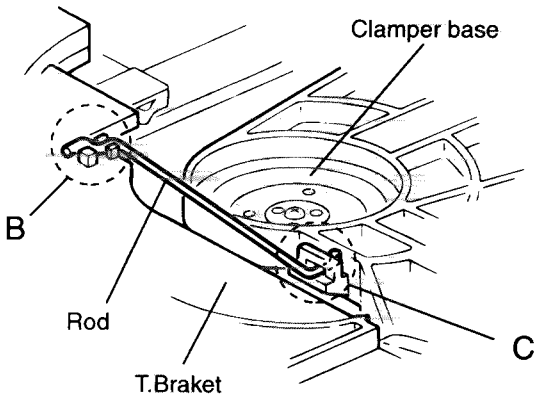


Fig.2

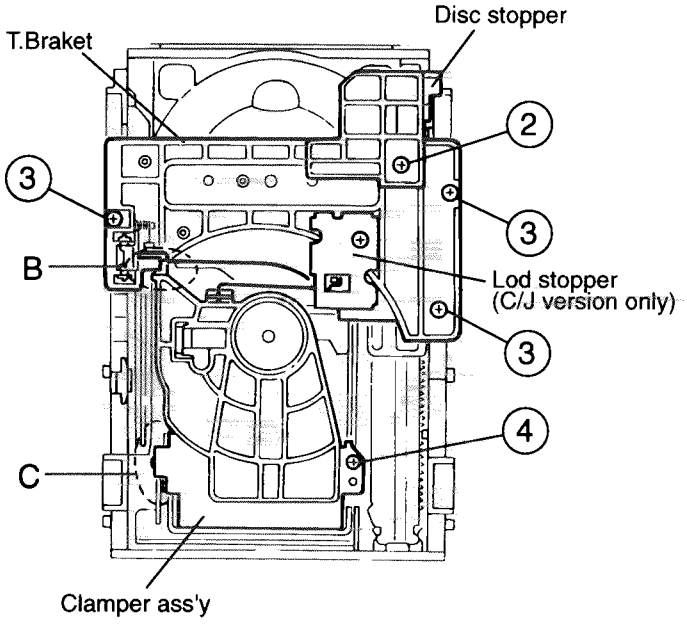


Fig.3

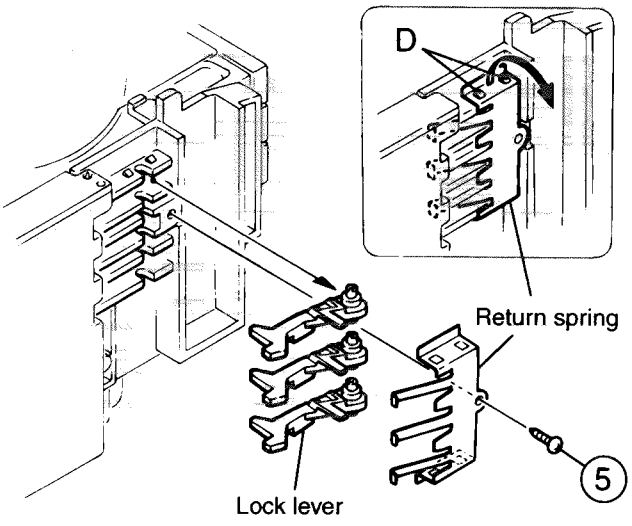


Fig.4

11. Check whether the lifter unit stopper has been caught into the hole at the section "E" of CD tray assembly as shown in Fig.5.
12. Make sure that the driver unit elevator is positioned as shown in Fig.6 from to the second or fifth hole on the left side face of the CD changer mechanism assembly.

[Caution] In case the driver unit elevator is not at above position, set the elevator to the position as shown in Fig.7 by manually turning the pulley gear as shown in Fig.8.

13. Manually turn the motor pulley in the clockwise direction until the lifter unit stopper is lowered from the section "E" of CD tray assembly(See Fig.8).
14. Pull out all of the three stages of CD tray assembly in the arrow direction "F" until these stages stop (See Fig.6).
15. At the position where the CD tray assembly has stopped, pull out the CD tray assembly while pressing the two pawls "G and G" on the back side of CD tray assembly(See Fig.9). In this case, it is easy to pull out the assembly when it is pulled out first from the stage CD tray assembly.

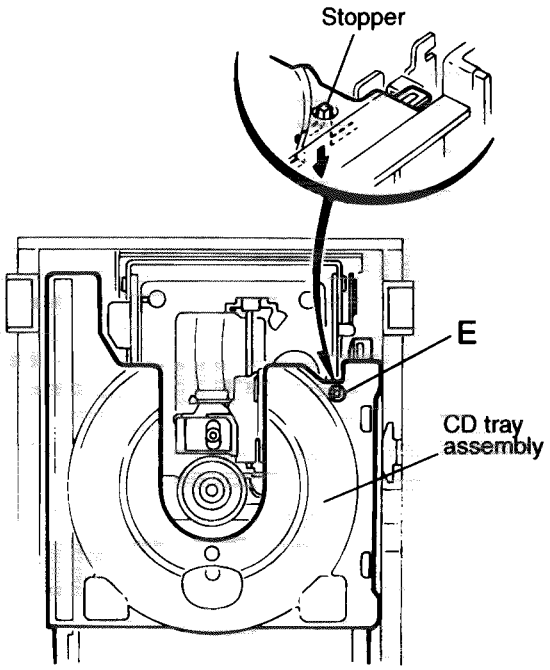


Fig.5

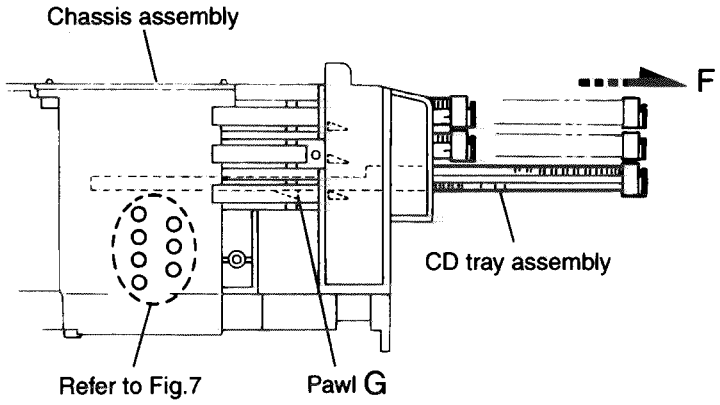


Fig.6

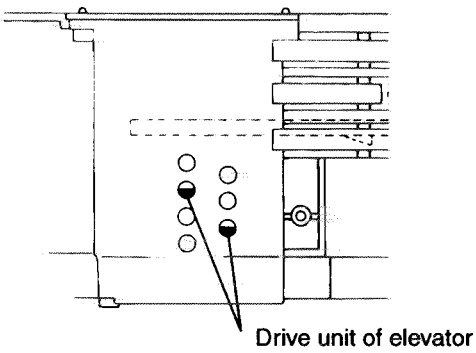


Fig.7

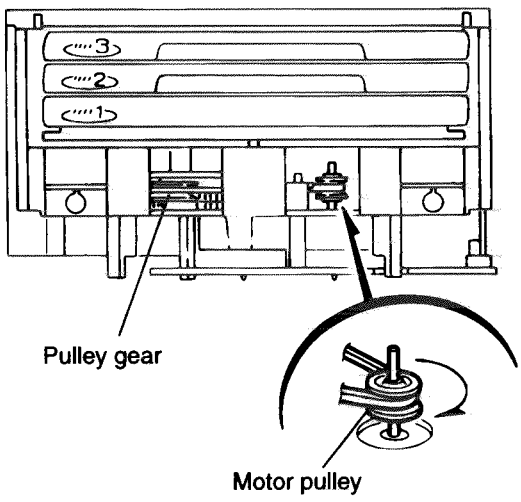


Fig.8

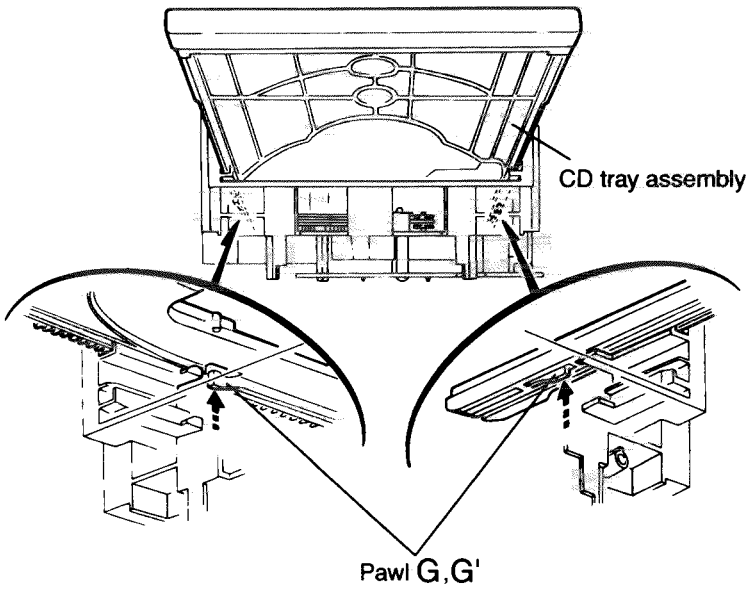


Fig.9

■Removing the CD loading mechanism assembly(See Fig.10)

1. While turning the cams R1 and R2 assembly in the arrow direction "H" , align the shaft "I" of the CD loading mechanism assembly to the position shown in
2. Fig.10.
   Remove the four screws 6 retaining the CD loading mechanism assembly.

■Removing the CD traverse mechanism (See Fig.11 and 12)

1. For dismounting only the CD traverse mechanism without removing the CD loading mechanism assembly, align the shaft "J" of the CD loading mechanism assembly to the position shown Fig.11 while turning the cam R1 and R2 assembly in the arrow direction "K" .
2. By raising the CD loading mechanism assembly in the arrow direction "L" , remove the assembly from the lifter unit

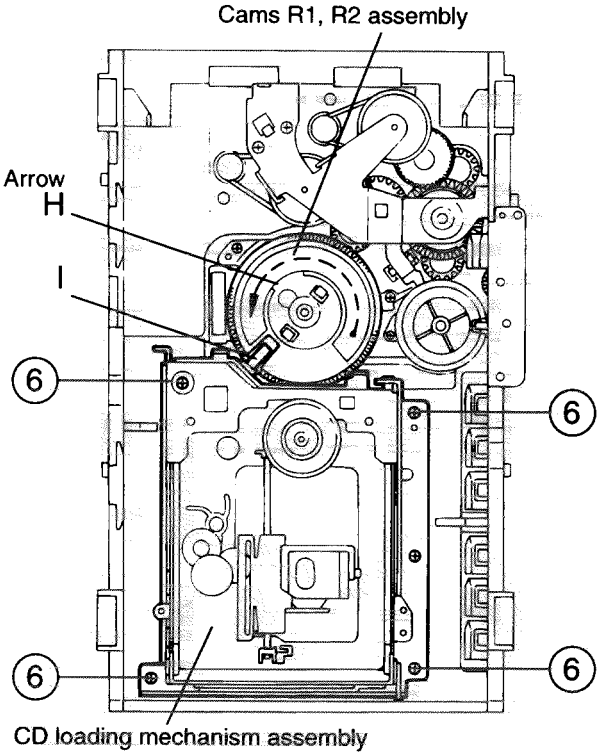


Fig.10

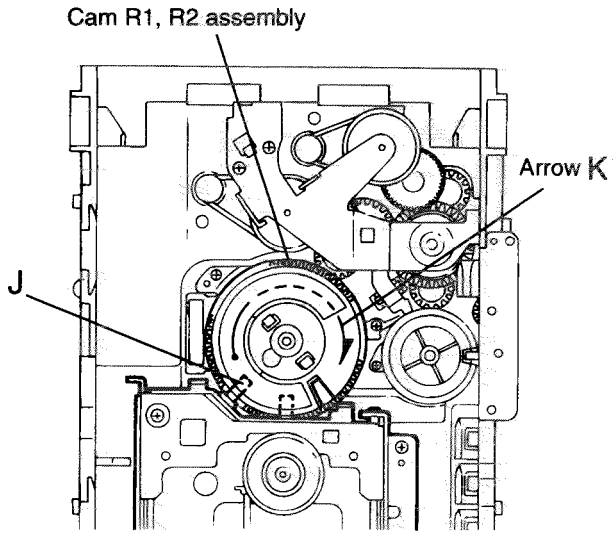


Fig.11

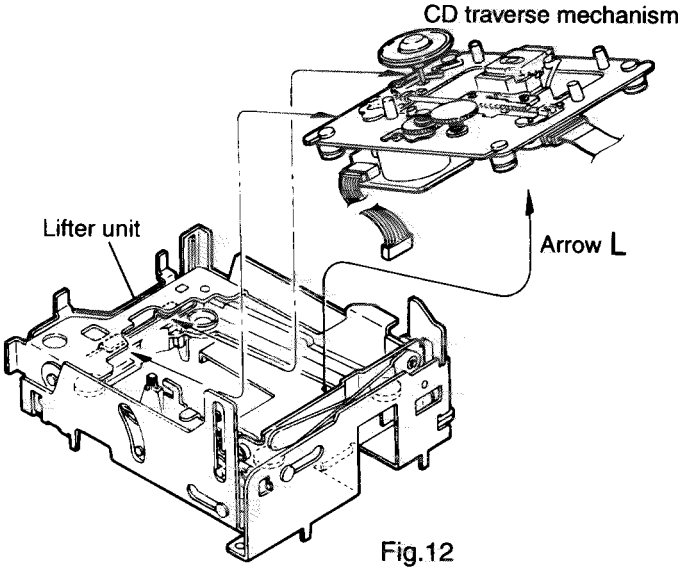


Fig.12

■Removing the CD pick unit (See Fig.13)

1. Move the cam gear in the arrow direction a . Then, the CD pickup unit will be moved in the arrow direction b .
2. According to the above step, shift the CD pickup unit to the center position.
3. While pressing the stopper retaining the shaft in the arrow direction c , pull out the shaft in the arrow direction d .
4. After dismounting the shaft from the CD pickup unit, remove the CD pickup unit

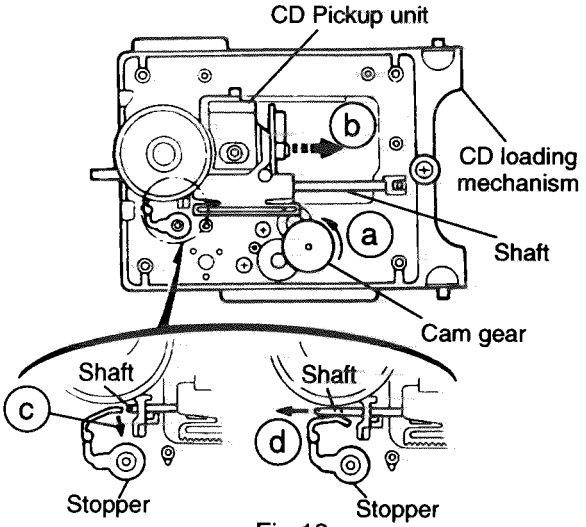


Fig.13

■Removing the cam unit (See Fig.14 ~17)

1. Remove the CD loading mechanism assembly.
2. While turning the cam gear L, align the pawl "N" position of the drive unit to the notch position(Fig.16) on the cam gear L.
3. Pull out the drive unit and cylinder gear(See Fig.17).
4. While turning the cam gear L, align the pawl "O" position of the select lever to the notch position(Fig.18) on the cam gear L.
5. Remove the four screws 9 retaining the cam unit(cam gear L and cams R1/R2 assembly)(See Fig.18).

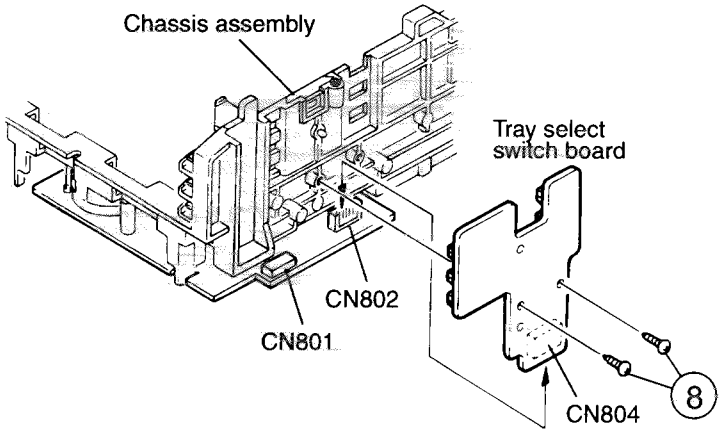


Fig.14

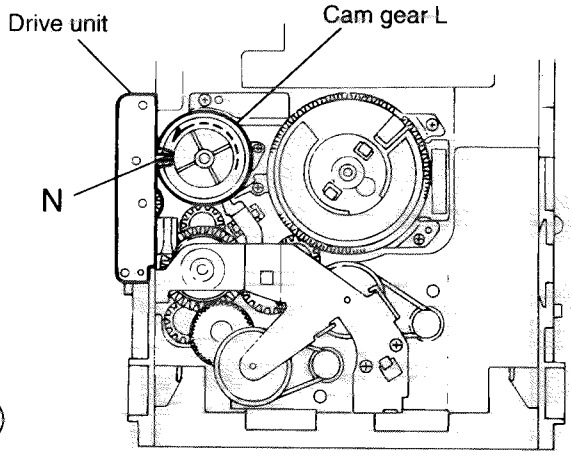


Fig.15

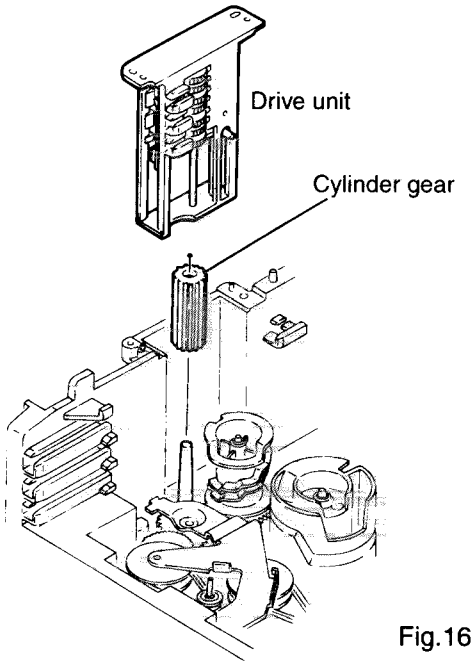


Fig.16

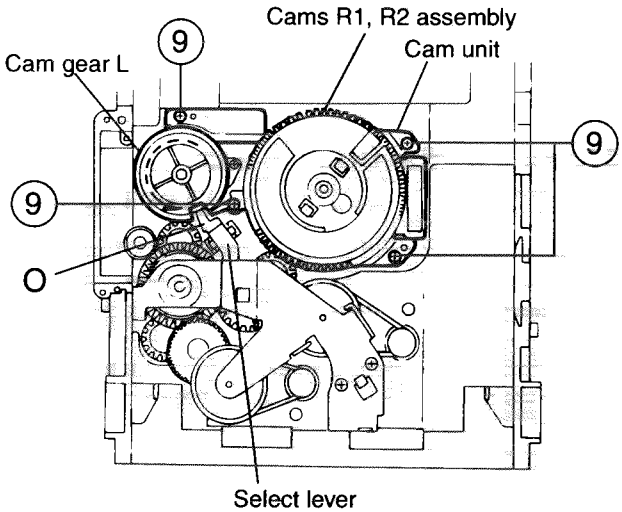


Fig.17

■Removing the actuator motor and belt (See Fig.18~21)

1. Remove the two screws 10 retaining the gear bracket (See Fig.19).
2. While pressing the pawl "P" fixing the gear bracket in the arrow direction, remove the gear bracket (See Fig.19).
3. From the notch "Q section" on the chassis assembly fixing the edge of gear bracket, remove and take out the gear bracket(See Fig. 20).
4. Remove the belts respectively from the right and left actuator motor pulleys and pulley gears(See Fig. 19).
5. After turning over the chassis assembly, remove the actuator motor while spreading the four pawls "R" fixing the right and left actuator motors in the arrow direction(See Fig. 21).

[Note] When the chassis assembly is turned over under the conditions wherein the gear bracket and belt have been removed, then the pulley gear as well as the gear, etc. constituting the gear unit can possibly be separated to pieces. In such a case, assemble these parts by referring to the assembly and configuration diagram in Fig. 22.

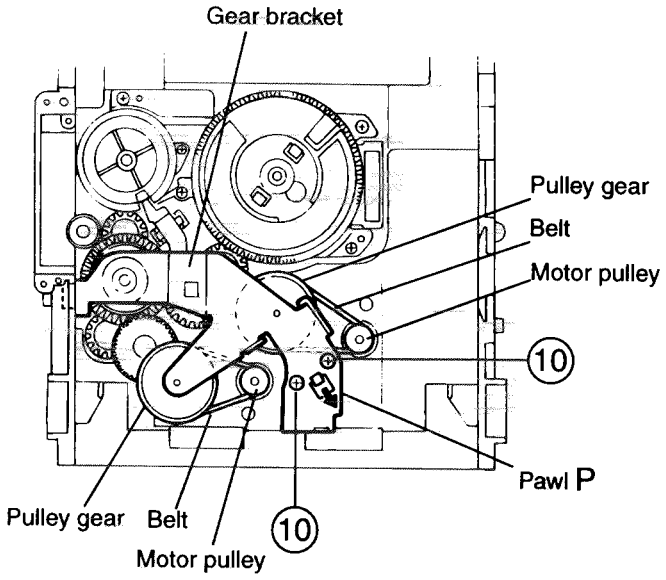


Fig.18

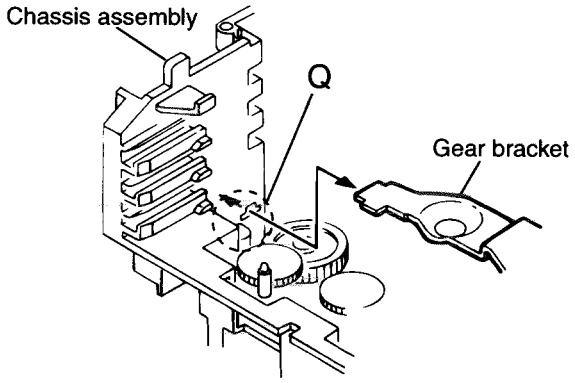


Fig.19

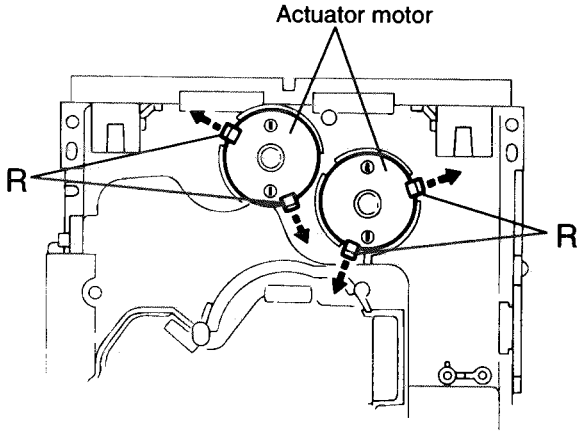


Fig.20

Assembly and Configuration Diagram

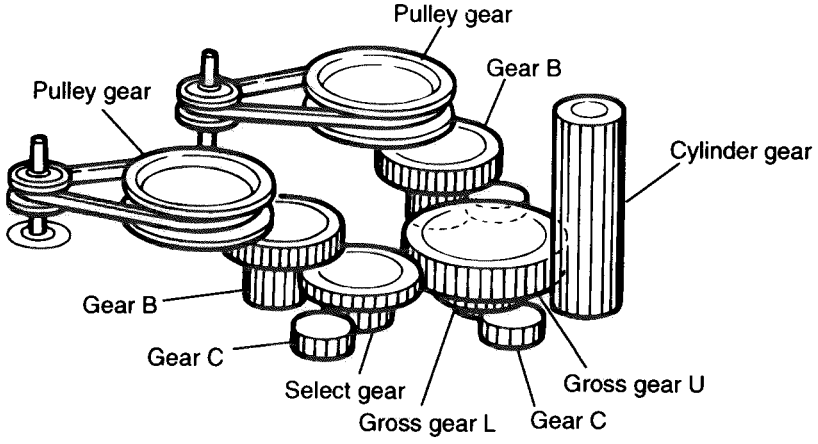


Fig.21

■Removing the cams R1/R2 assembly and cam gear L(See Fig.22)

1. Remove the slit washer fixing the cams R1 and R2 assembly.
2. By removing the two pawls "S" fixing the cam R1, separate R2 from R1.
3. Remove the slit washer fixing the cam gear L.
4. Pull out the cam gear L from the C.G. base assembly.

■Removing the C.G. base assembly (See Fig.22 and 23)

Remove the three screws 11 retaining the C.G. base assembly.

[Caution] To reassemble the cylinder gear, etc.with the cam unit (cam gear and cans R1/R2 assembly), gear unit and drive unit, align the position of the pawl "N" on the drive unit to that o f the notch on the cam gear L. Then, make sure that the gear unit is engaged by turning the cam gear L (See Fig. 24).

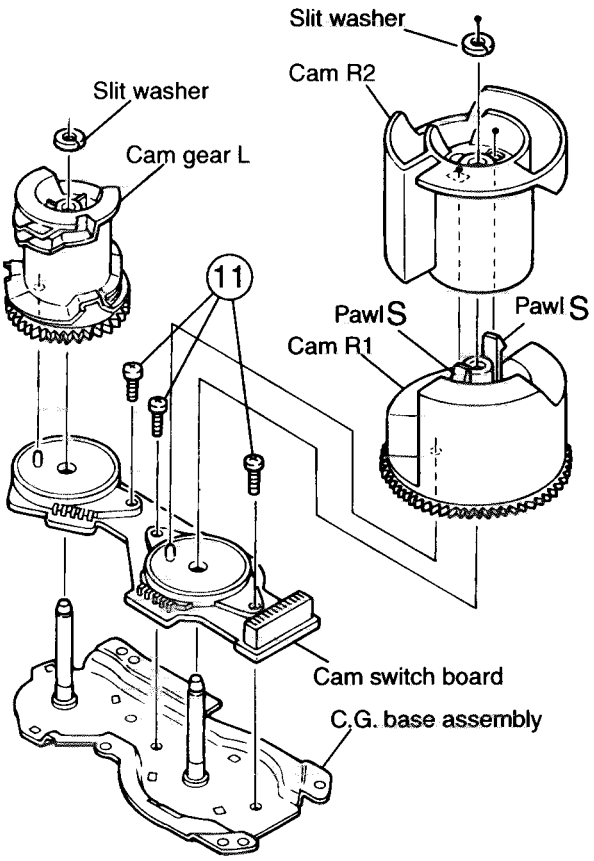


Fig.22

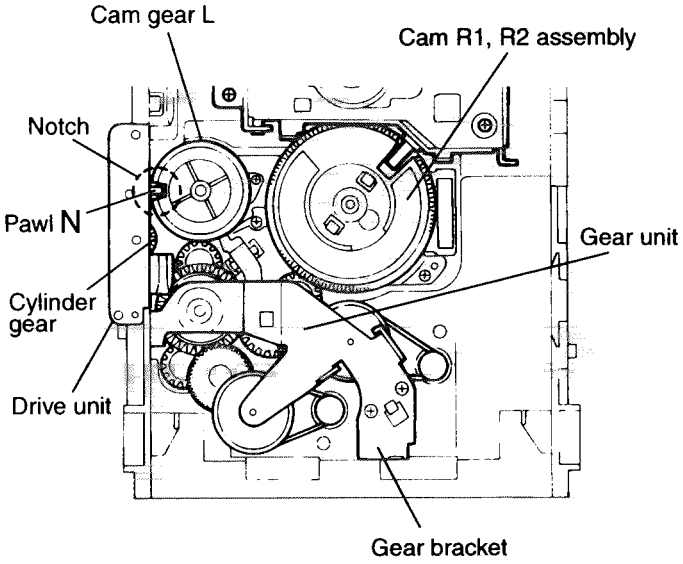
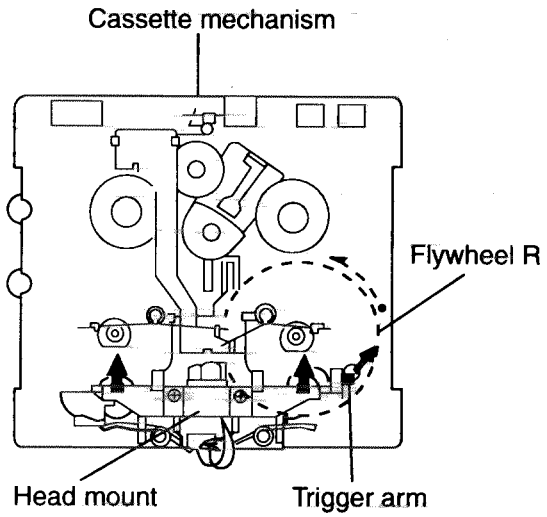


Fig.23

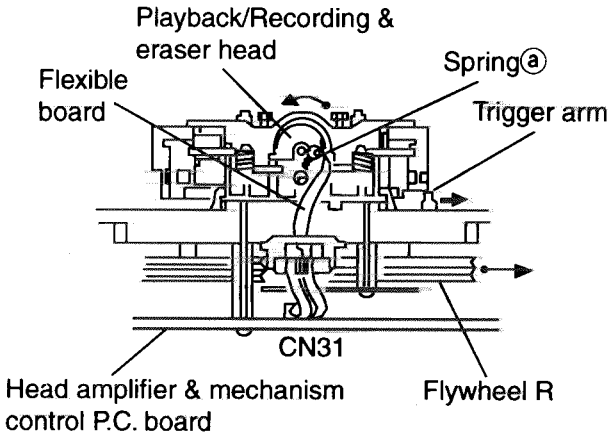
< Cassette Mechanism Section >

■ Removing the Playback,Recording and Eraser Heads

1. While shifting the trigger arms seen on the right side of the head mount in the arrow direction,turn the flywheel R in counterclockwise direction until the head mount has gone out with a click (See Fig 1).
2. When the flywheel R is rotated in counterclockwise direction, the playback head will be turned in counterclockwise direction from the position in Fig 2 to that in Fig 3.
3. At this position, disconnect the flexible P.C.board (outgoing from the playback head) from the connector CN301 on the head amp. and mechanism control P.C. board.
4. After dismounting the FPC holder,remove the flexible P.C.board.
5. Remove the flexible P.C.board from the chassis base.
6. Remove the spring ⓐ from behind the playback head.
7. Loosen the reversing azimuth screw retaining the playback head.
8. Take out the playback head from the front of the head mount.
9. The recording and eraser heads should also be removed similarly according to Steps 1~8 above.



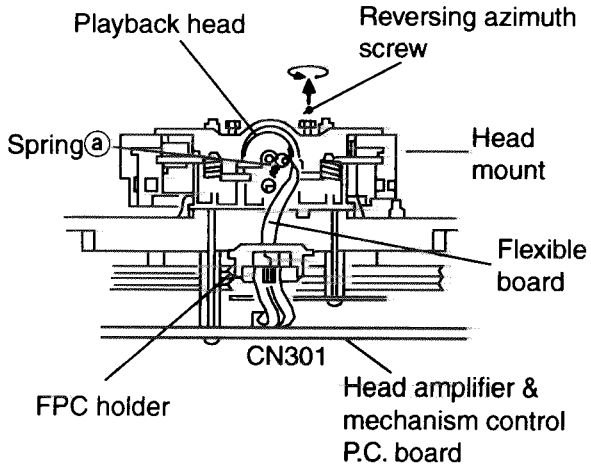
(Mechanism A side)



(Mechanism A side)

● Reassembling the Playback, Recording and Eraser Heads

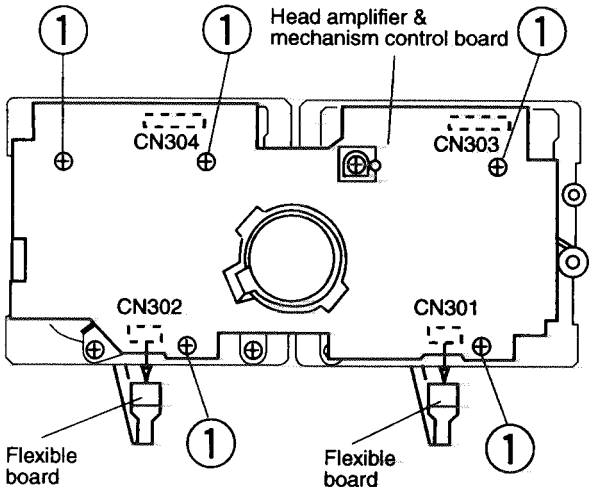
1. Reassemble the playback head from the front of the head mount to the position as shown in Fig 3.
2. Fix the reversing azimuth screw.
3. Set the spring a from behind the playback head.
4. Attach the flexible P.C.board to the chassis base, and fix it with the FPC holder as shown in Fig 3.
5. The recording and eraser heads should also be reassembled similarly according to Steps 1~4 above.



(Mechanism B side)

■Removing the head Amp.and Mechanism Control P.C.Board (See Fig 4)

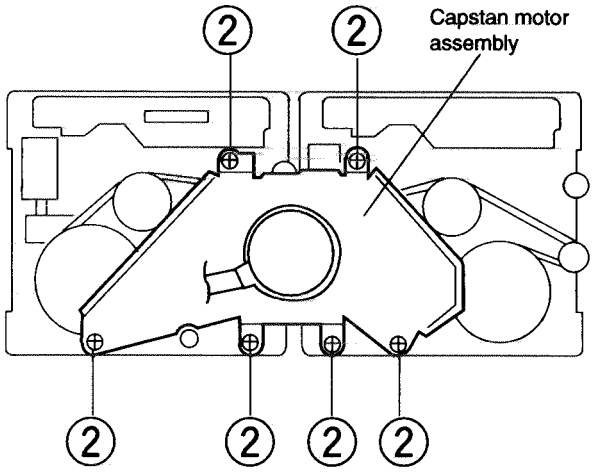
1.Remove the cassette mechanism assembly.
2.After turning over the cassette mechanism assembly,remove the five screws ① retaining the head amp. and mechanism control P.C. board
3.Disconnect the connectors CN303 and CN304 on the P.C.Board and the connectors CN1 on both the right and left side reel pulse P.C.Boards.
4.When necessary, remove the 4pin parallel wire soldered to the main motor

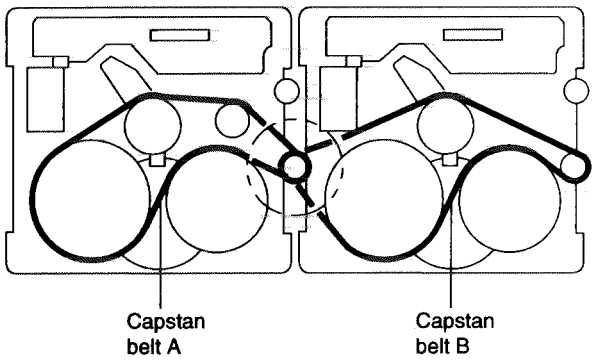


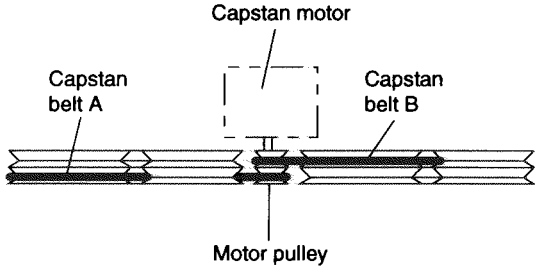
■Removing the Capstan Motor Assembly

1.Remove the six screws ② retaining capstan motor assembly (See Fig 5).
2.While raising the capstan motor, remove the capstan belts A and B respectively from the motor pulley (See Fig 6).

Caution 1: Be sure to handle the capstan belts so carefully that these belts will not be stained by grease and other foreign matter. Moreover, these belts should be hand while referring to the capstan belt hanging method.

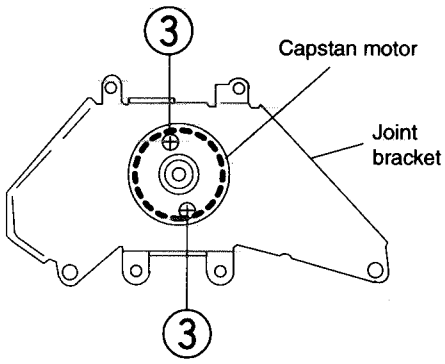






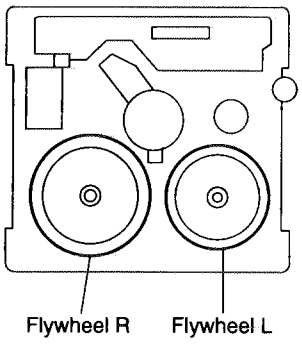
■Removing the Capstan Motor (See Fig 8)

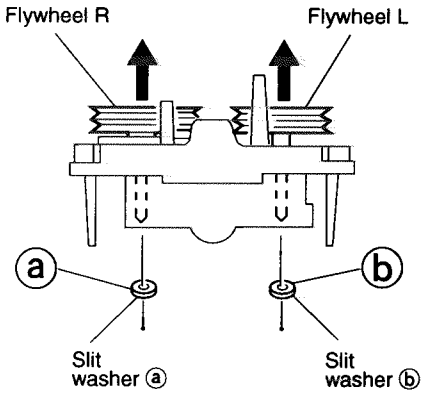
From the joint bracket, remove the two screws③ retaining the capstan motor.



■Removing the Flywheel (See Fig 9.10)

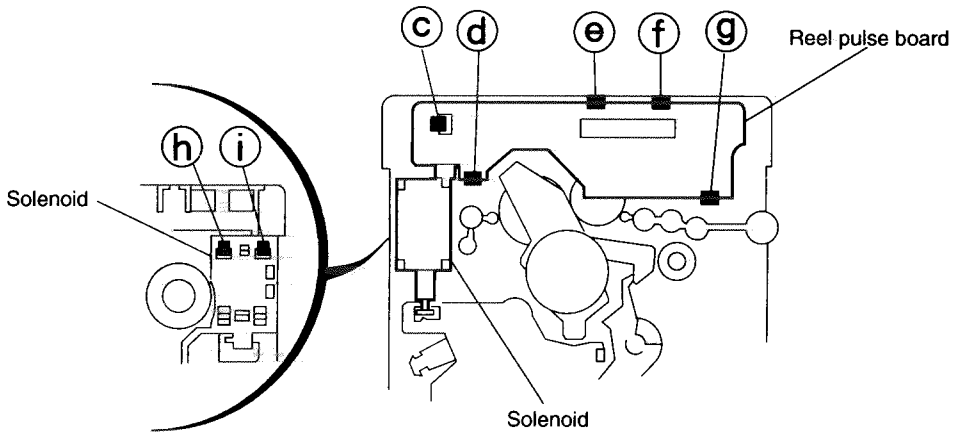
1. Remove the head amp. and mechanism control P.C.Board.
2. Remove the capstan motor assembly.
3. After turning over the cassette mechanism, remove the slit washers ⓐ andⓑ fixing the capstan shafts R and L, and pull out the flywheels R and L respectively from behind the cassette mechanism.





■Removing the Reel Pulse P.C.Board and Solenoid (See Fig 11)

1. Remove the five pawls (ⓒ ⓓ ⓔ ⓕ ⓖ) retaining the reel pulse P.C.Board.
2. From the surface of the reel pulse P.C.Board parts, remove the two pawls ⓗ and ⓘ retaining the solenoid.



Flow of Functional Operation Until TOC Read

Power ON → Power Key → Slider turns REST SW ON.

Check Point: Check that the voltage at the pin1 of CN604 is 0V (a moment)?

Automatic tuning of TE offset

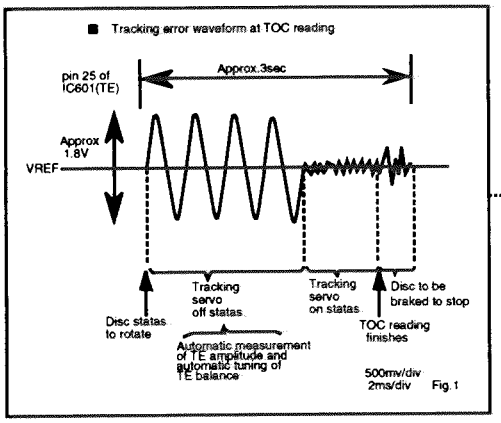
Laser ON → Check that the voltage at the pin3 of IC601 + side is + 5V?

Detection of disc

Automatic tuning of Foucus offset

Automatic measurement of Focus A-curve amplitude → Confirm that the Focus error S-cuve siganl at the pin27 of IC601 is approx.2Vp-p

Disc is rotated → Confirm that the siganl from pin24 IC603 is 0V as a accelerated pulse during approx.400ms.



Focus servo ON (Tracking servo ON)

Automatic measurement of Tracking error amplitude → Confirm the waveform of the Tracking error signal at the pin25 of IC601 (R612) (See fig-1)

Automatic tuning of Tracking error balance

Automatic tuning of Focus error balance

Automatic tuning of Focus error gain

Automatic tuning of Tracking error gain

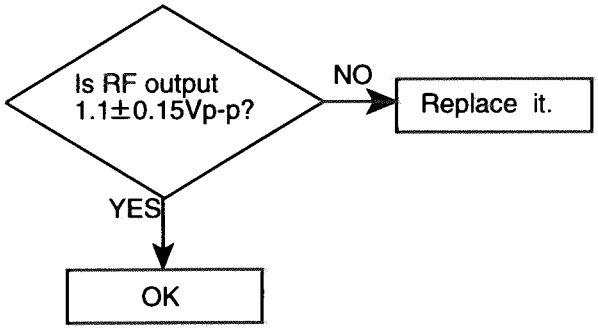
TOC reading → Confirm the eys-pattern at the lead of TP1

Play a disc

Maintenance of Laser Pickup

(1) Cleaning the pick up lens
Befor you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

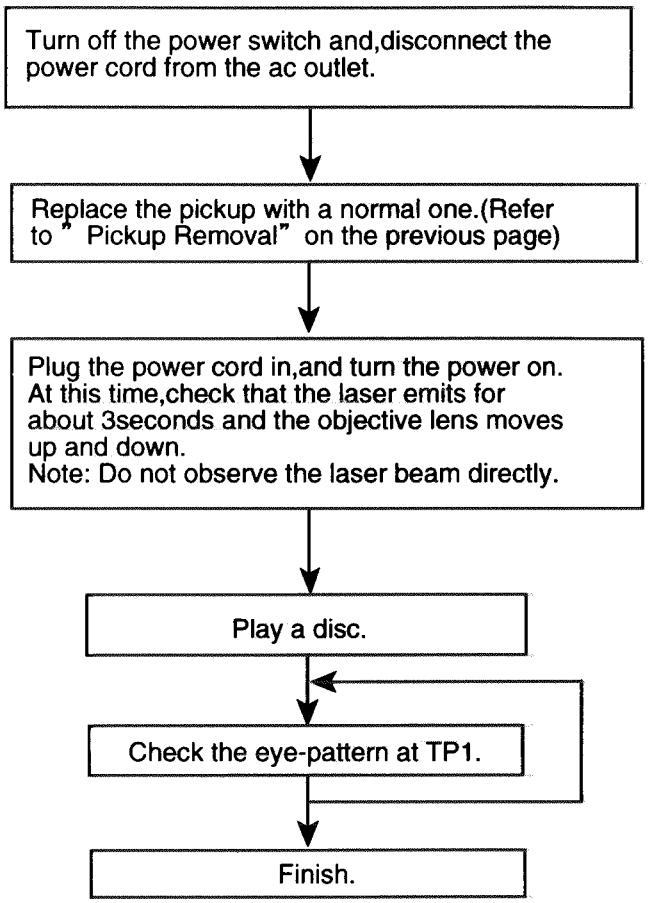
(2) Life of the laser diode (Fig.1)
When the life of the laser diode has expired, the following symptoms wil appear.
(1) The level of RF output (EFM output:amplitude of eye pattern) will below.



(Fig.1)

(3) Semi-fixed resistor on the APC PC board
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power.Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value,the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally,the laser pickup may be damaged due to excessive current.

Replacement of Laser Pickup


Turn off the power switch and,disconnect the power cord from the ac outlet.
Replace the pickup with a normal one.(Refer to " Pickup Removal" on the previous page)
Plug the power cord in,and turn the power on. At this time,check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc.
Check the eye-pattern at TP1.
Finish.

Adjustment Procedures

■ Measurement Instruments Required for Adjustment

1. Low frequency oscillator,
   This oscillator should have a capacity to output 0dBs to 600Ω at an oscillation frequency of 50Hz-20kHz.
2. Attenuator impedance : 600Ω
3. Electronic voltmeter
4. Frequency counter
5. Wow flutter meter
6. Test tape
   VT712 : For Tape speed and wow flutter (3kHz)
   VT724 : For Reference level (1kHz)
   TMT7036 : For Head angle(10kHz),Play back frequency characteristics(1kHz),and dubbing frequency characteristics(63,1,10kHz)
   Because of frequency-mixed tape with 63,1k,10k and 14kHz(250nWb/m -24dB).
   Use this tape together with a filter.
7. Blank tape
   TAPE Ⅰ : AC-225, TAPE Ⅱ : AC-514
8. Torque gauge : For play and back tension
   Forward ; TW2111A, Reverse ; TW2121A
   Fast Forward and Rewind ; TW2231A
9. Test disc
   : CTS-1000(12cm),GRG-1211(8cm)
10. Jitter meter

■ Measurement Conditions

Power supply voltage : AC110-240V(50Hz) for U,A group
: 220V(60Hz) for UP
: 120V(60Hz) for J,C
Reference output : Speaker 0.775V/6 Ω
: Headphone 0.0775V/32 Ω
Measurement
output terminal : Speaker out
:TP101(Mesuring for TUNER/DECK/CD)

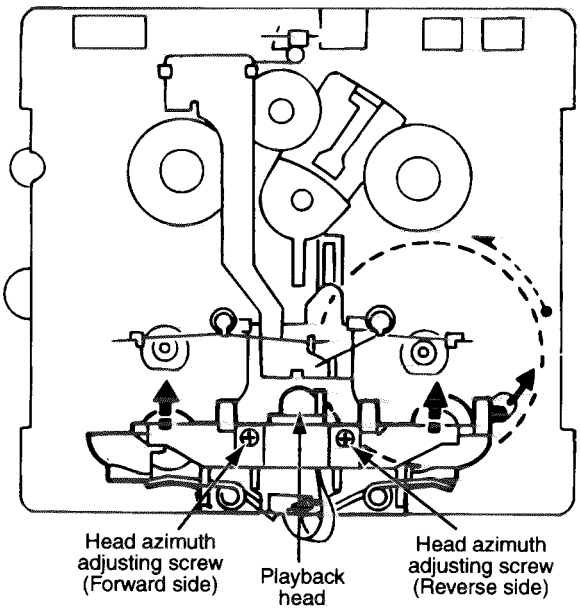
Radio input signal
AM modulation frequency : 400Hz
Modulation factor : 30%
FM modulation frequency : 400Hz
Frequency displacement : 22.5kHz

Standard measurement positions of volume and switch
Sound mode : Off
SA-Bass : Off
Main VOL. : 0 Minimum
KARAOKE : OFF (U,A group only)
ECHO : OFF (U,A group omly)
Travers mecha set position : Disc 1

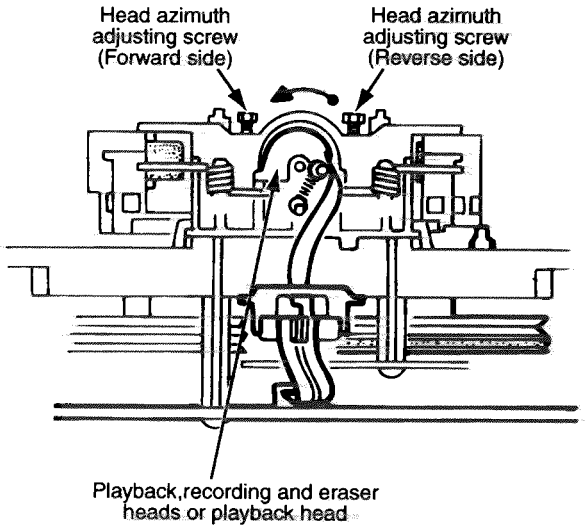
Precautions for Measurement
1. Apply 30pF and 33kΩ to the IF sweeper output side and 0.082μF and 100kΩ in series to the sweeper input side.
2. The IF sweeper output level should be made as low as possible within the adjustable range.
3. Since the IF sweeper is a fixed device, there is no need to adjust this sweeper.
4. Since a ceramic oscillator is used, there is no need to perform any MPX adjustment.
5. Since a fixed coil is used, there is no need to adjust the FM tracking.
6. The input and output earth systems are separated. In case of simultaneously measuring the voltage in both of the input and output systems with an electronic voltmeter for two channels, therefore, the earth should be connected particularly.
7. In the case of BTL connection amplifier, the minus terminal of speaker is not for earthing. Therefore, be sure not to connect any other earth terminal to this terminal. This system is of an OTL system.

■Arrangement of Adjusting Positions

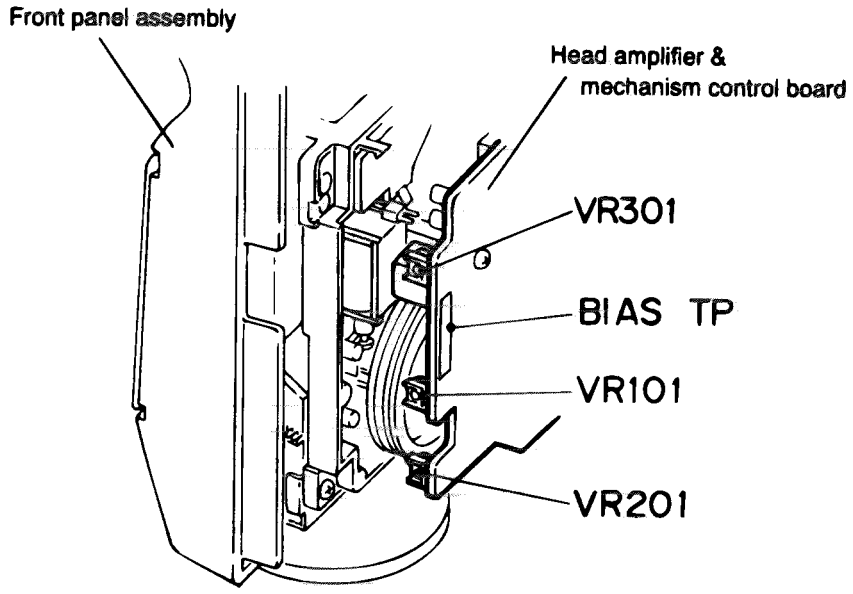
Cassette mechanism section (Mechanism A section)



Cassette mechanism section (Back side)



Cassette Mechanism Unit Section



■Tape Recorder Section

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Confirmation of head angle	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistor:3Ω) :Headphone terminal	1.Playback the test tape TMT7036(10kHz). 2.With the playback mechanism or recording & playback mechanism, adjust the head azimuth screw so that the forward and reverse output levels become maximum.After adjustment,lock the head azimuth at least by half a turn. 3.In either case,this adjustment should be performed in both the forward and reverse directions with the head azimuth screw.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Confirmation of tape speed	Test tape :VTT712(3kHz) or TMT7036(3kHz) Measurement output terminal :Headphone terminal	<Constant speed> Adjust VR301 so that the frequency counter reading becomes 3,010Hz±15Hz when playing back the test tape VTT712(3kHz)with the playback mechanism or playback and recording mechanism after ending forward winding of the tape.	Tape speed of decks (A and B) :3,010Hz ±15Hz	VR301

■Reference Values for Confirmation items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Double tape speed	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistance:3Ω) measurement output terminal :Headphone terminal	After setting to the double speed motor, confirm that the frequency counter reading becomes 4,800+400/-300Hz when the test tape VTT712 (3kHz) has been play back with the playback mechanism.	4,800+400/-300Hz	Playback mechanism side
Difference between the forward and reverse speed. P.mecha and R/P mecha speed		When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanisms should be 6.0Hz or less.	60Hz or less	Both the playback and recording & playback mechanism
Wow & flutter	Test tape :TMT7036(10kHz) Measurement output terminal :Headphone terminal	When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding the frequency counter reading of wow& flutter should be 0.25% or less(WRMS).	0.25% or less (WRMS)	Both the playback and recording & playback mechanism

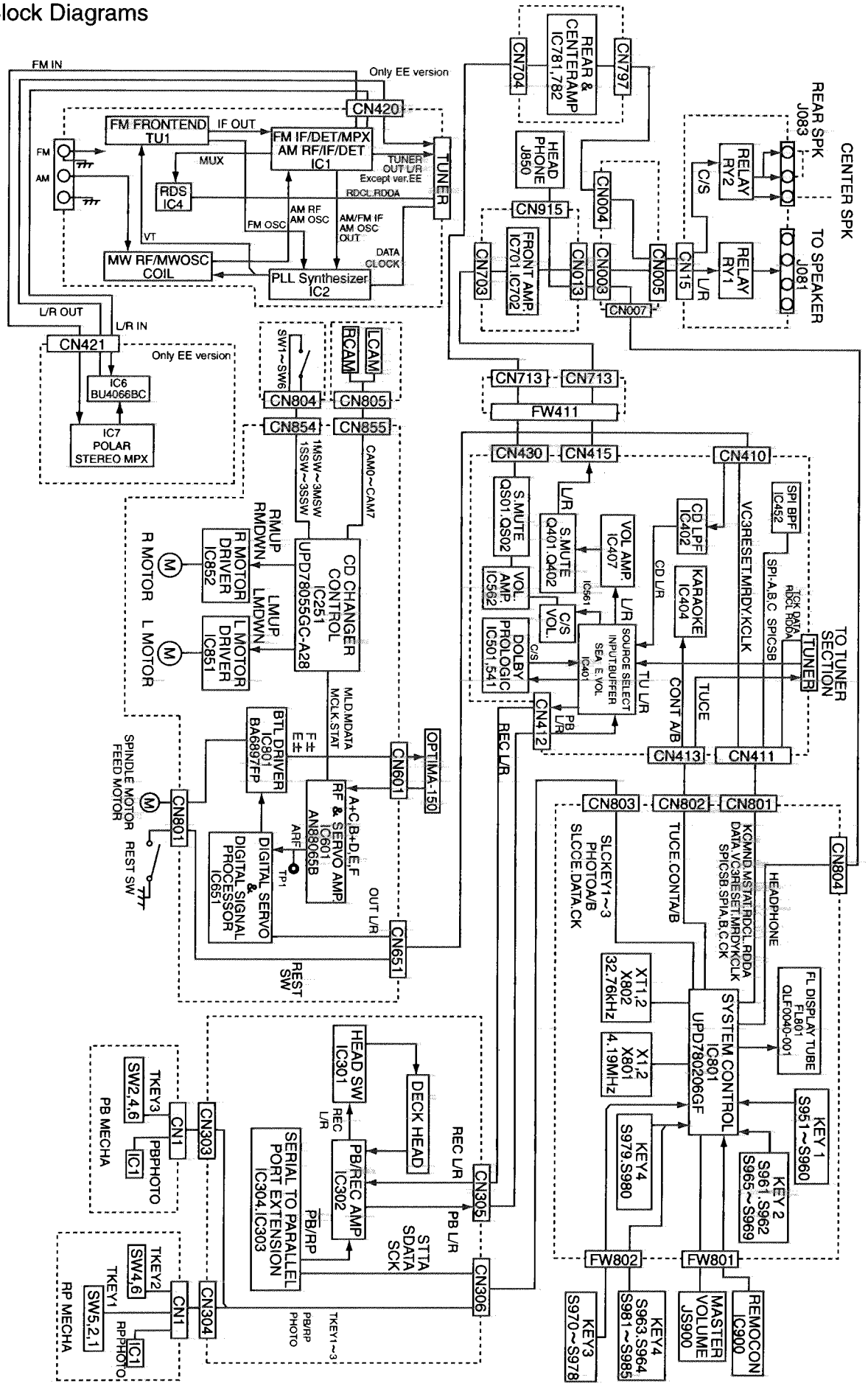
■Electrical Performance

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Adjustment of recording bias current (Reference value)	*Mode : Forward or reverse mode *Recording mode *Test tape :AC-514 and AC-225 Measurement output terminal :Both recording and headphone terminals	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYP Ⅱ and AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing conditions in advance. 2.After connecting 100Ω in series to the recorder head,measure the bias current with a valve voltmeter at both of the terminals. 3.After resetting the [PAUSE] mode,start recording. At this time,adjust VR101 for LcH and VR201 for RcH so that the recording bias current values become 4.0μA (TYP Ⅰ) and 4.20μA(TYP Ⅱ).	AC-225 :4.20μA AC-514 :4.0μA	LcH :VR101 RcH :VR201
Adjustment of recording and playback frequency characteristics	Reference frequency :1kHz and 10kHz (REF:-20dB) Test tape :TYP Ⅱ AC-514 Measurement input terminal :OSC IN	1.With the recording and playback mechanism,load the test tape(AC-514 to TYP Ⅱ),and set the mechanism to the recording and pausing condition in advance. 2.While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and playback the test tape. 3.While recording and playing back the test tape in TYP Ⅱ,adjust VR101 for LcH and VR201 for RcH so that the output deviation between 1kHz and 10kHz becomes -1dB±2dB.	Output deviation between 1kHz and 10kH :-1dB±2dB	LcH :VR101 RcH :VR201

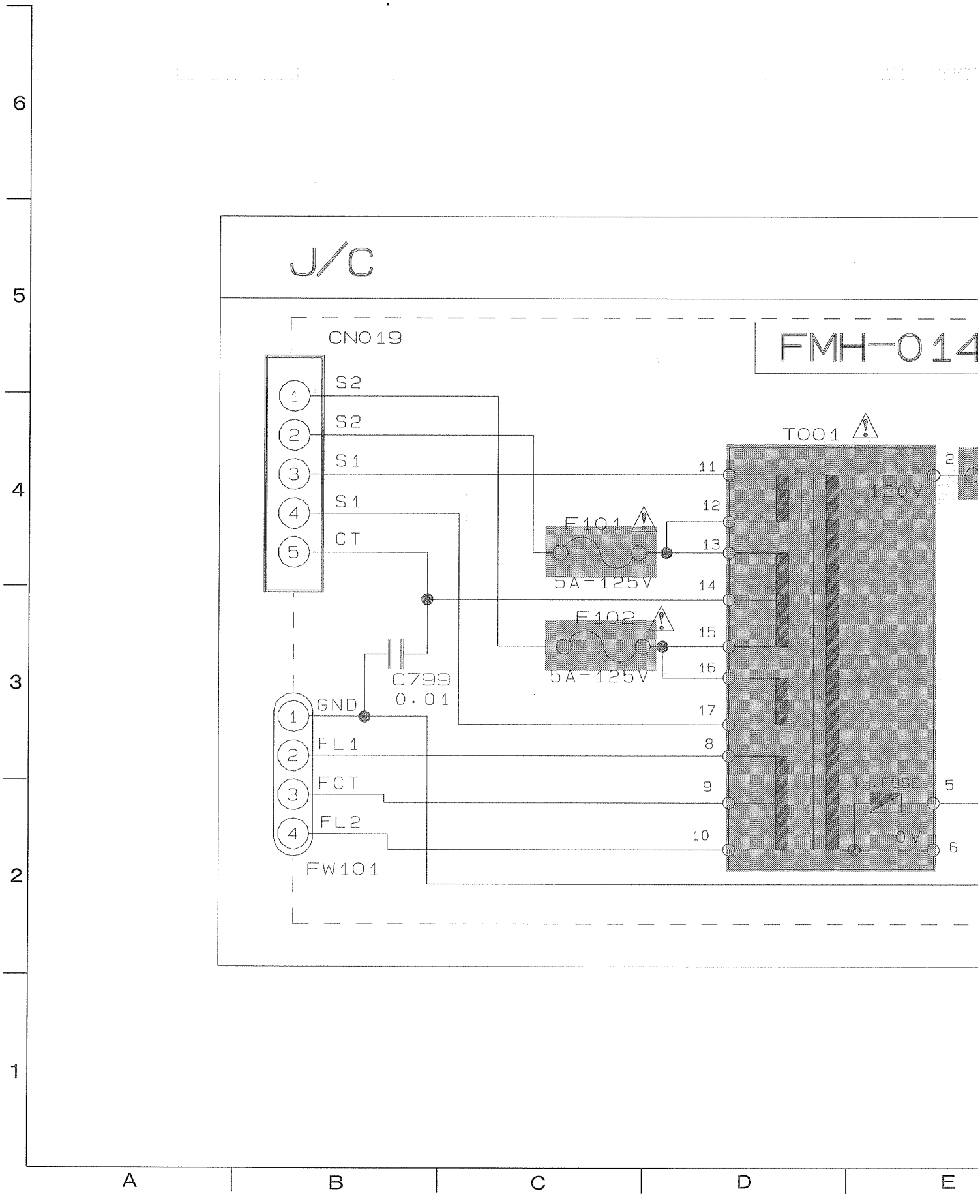
■Reference Values for Electrical Function Confirmation Items

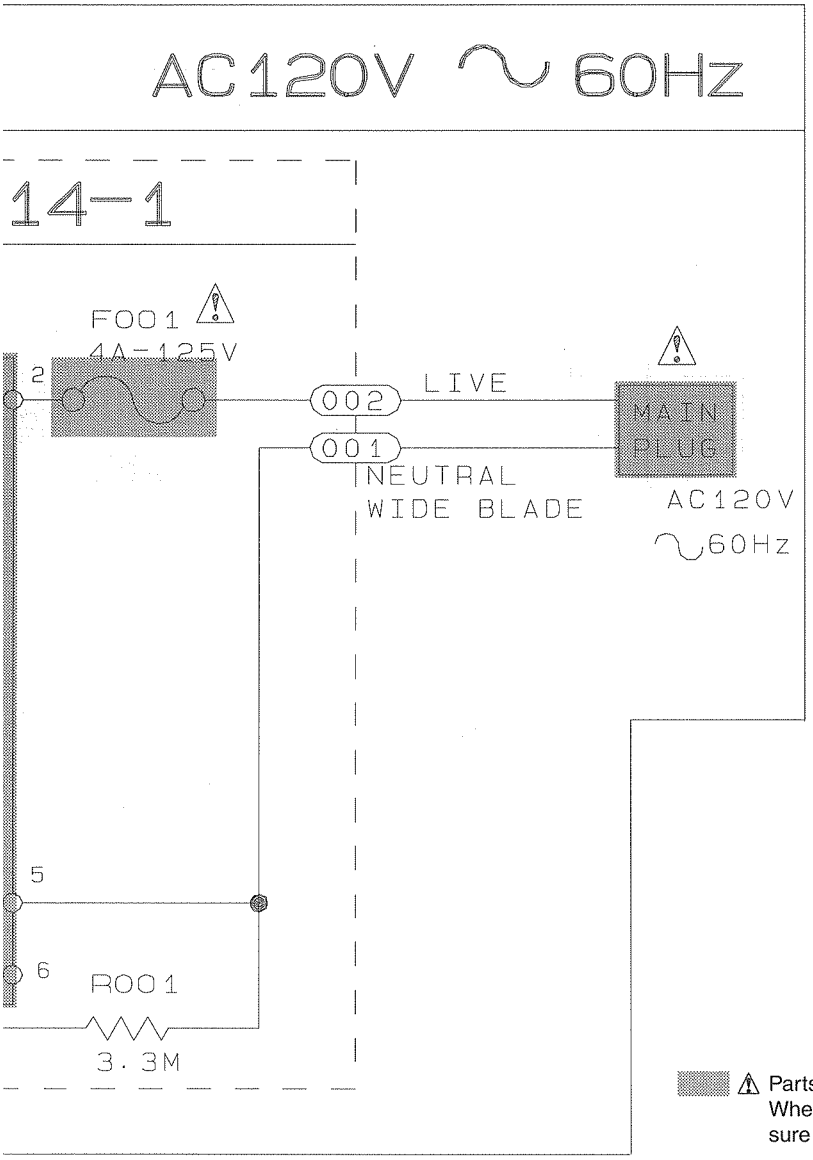
Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Recording bias frequency	*Recording and playback side forward or reverse *Test tape :TYP Ⅱ AC-514 *Measurement terminal BIAS TP on P.C.board	1.While changing over to and from BIAS 1 and 2, confirm that the frequency is changed. 2.With the recording and playback mechanism. load the test tape (AC-514 to TYP Ⅱ),and set the mechanism to the recording and pausing conditions in advance. 3.Confirm that the BIAS TP frequency on the P.C.board is 100kHz±6kHz.	100kHz ±6kHz	
Eraser current (Reference value)	*Recording and playback side forward or reverse *Recording mode *Test tape :AC-514 and AC-225 Measurement terminal Both of the eraser head	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYP Ⅱ and AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing condition in advance. 2.After setting to the recording conditions,connect 1MΩ in series to the eraser head on the recording and playback mechanism side,and measure the eraser current from both of the eraser terminal.	TYP Ⅱ :120mA TYP Ⅰ :75mA	

■Block Diagrams



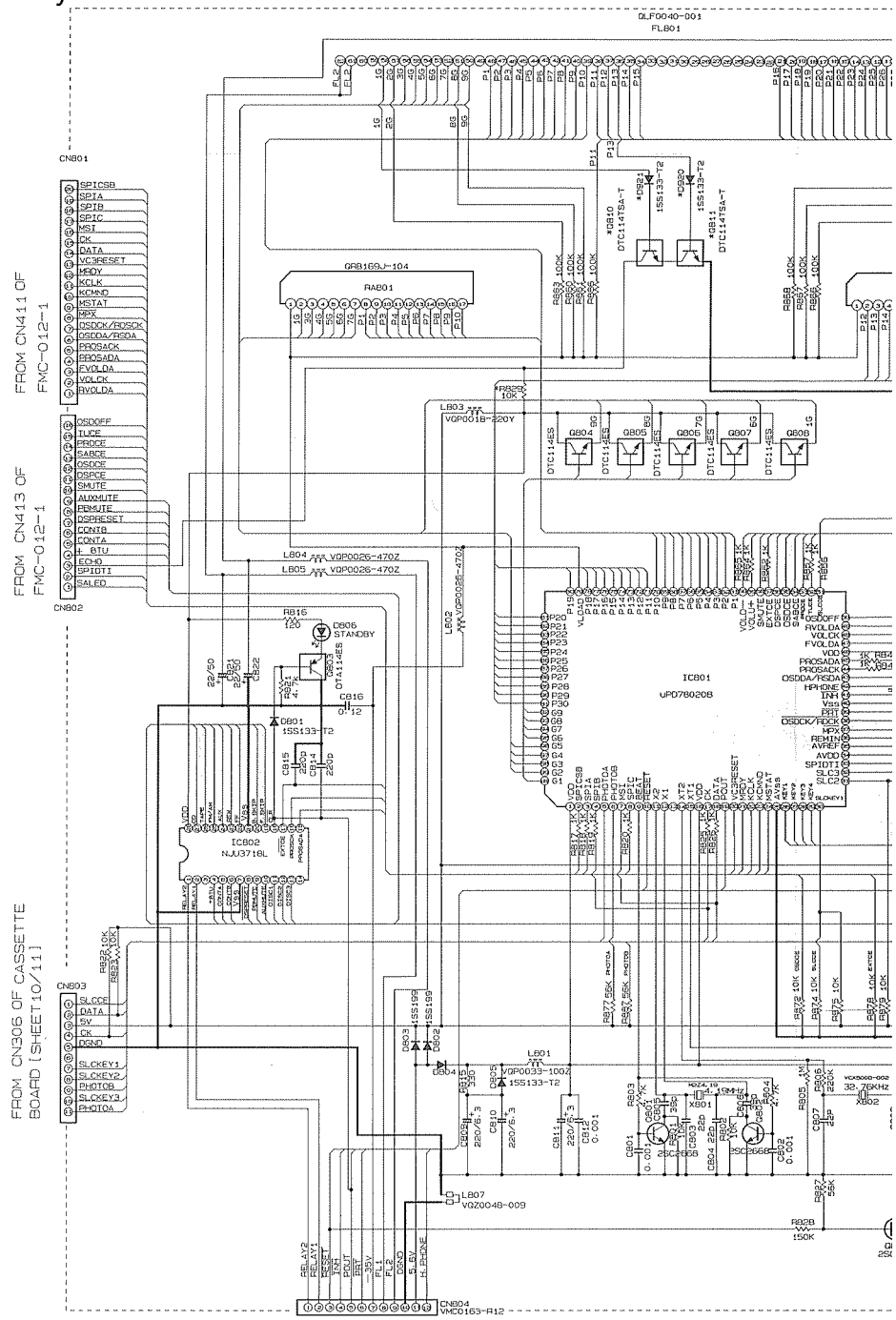
■ Power Primary Section





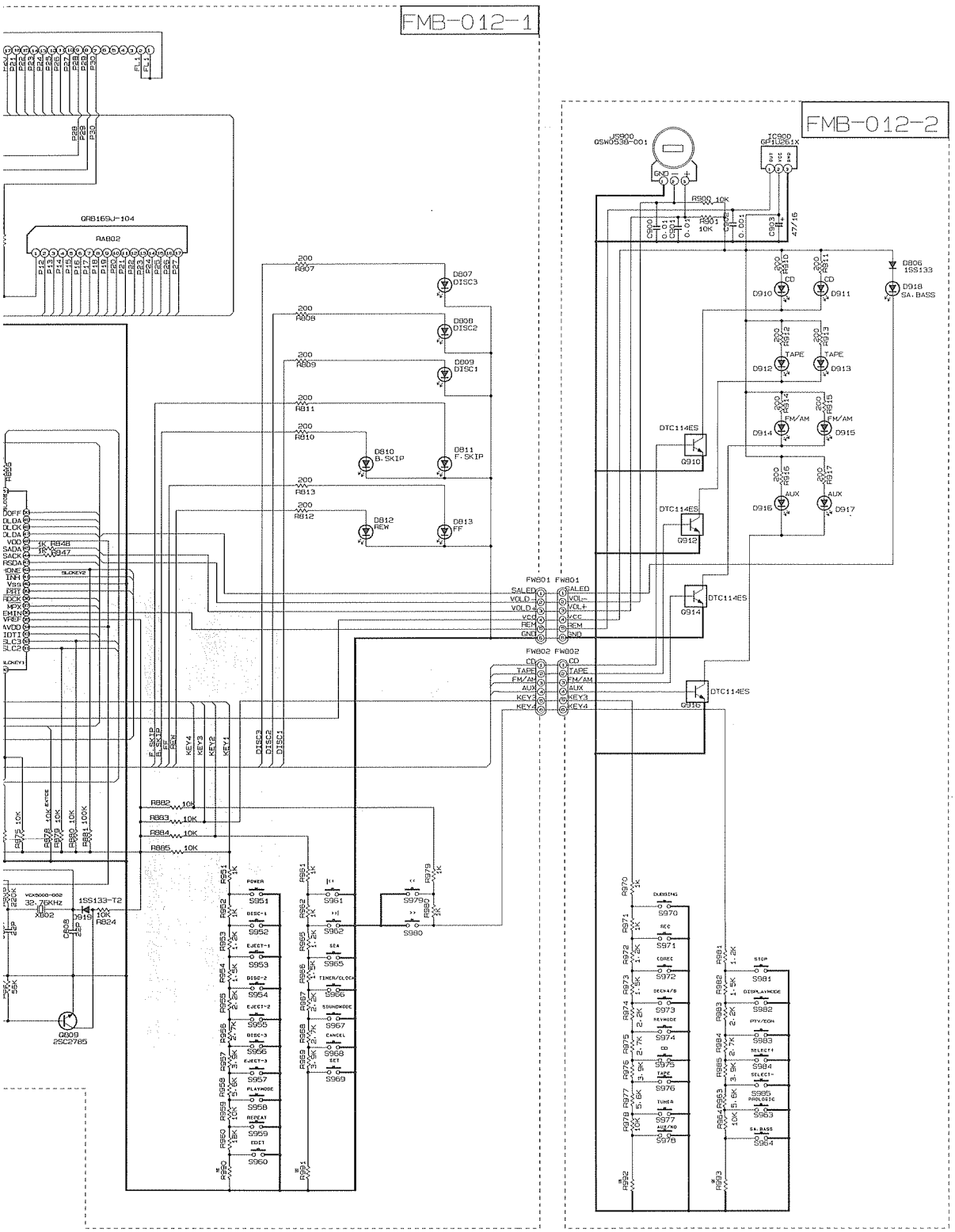
⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

FL / System Control Section



*MARK

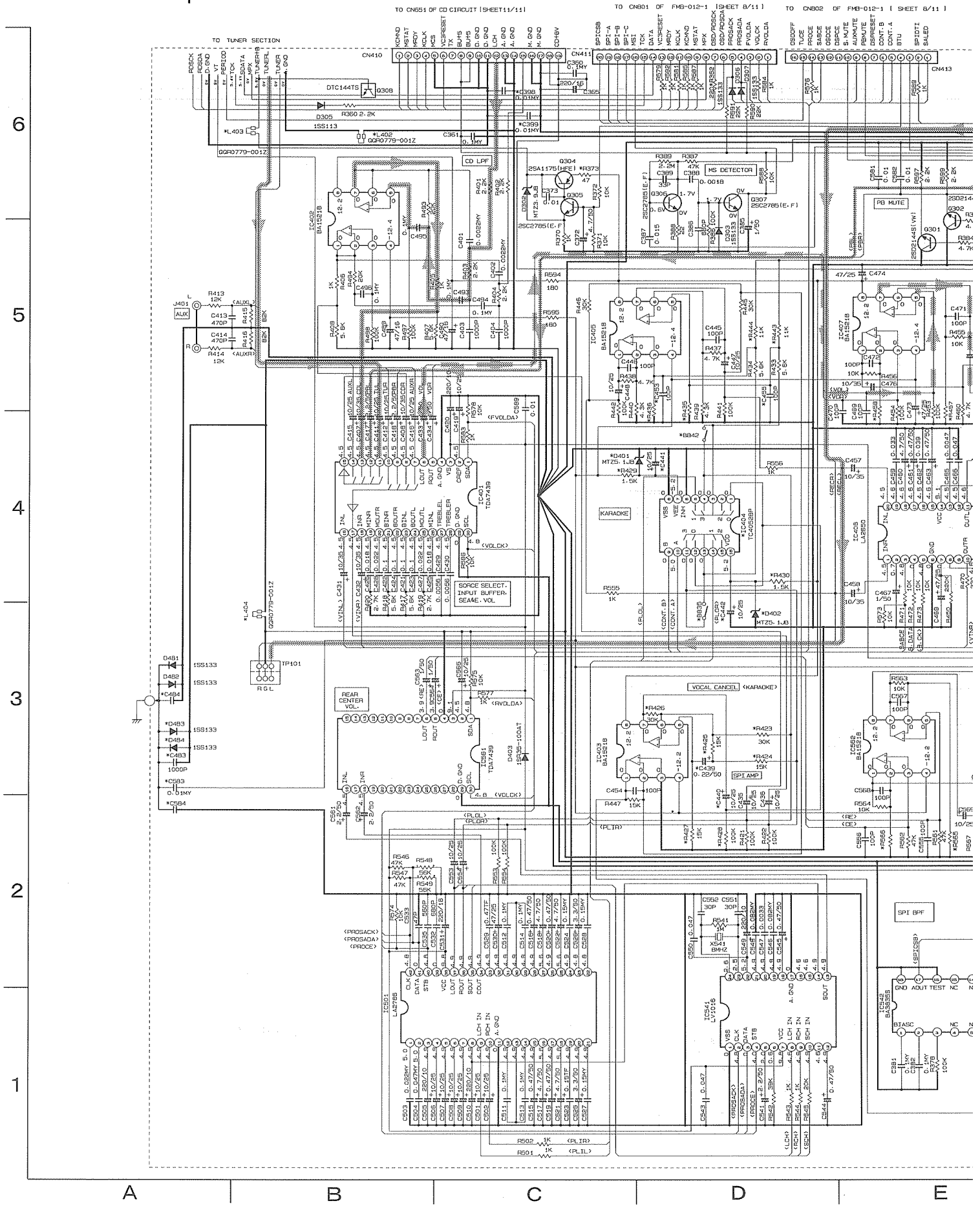
MODEL	VERSION	R992	R993	R990	R991	S982	S983	S984	S985	S963	Q810/Q811	D920/D921	R829
MX-D402T	J, C	18K	18K	220K	33K	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	U	18K	68K	220K	33K	NONE	NONE	NONE	NONE	NONE	USED	USED	USED
	UR	18K	NONE	220K	33K	NONE	NONE	NONE	NONE	NONE	USED	USED	USED
	A	18K	68K	220K	33K	NONE	NONE	NONE	NONE	NONE	USED	USED	USED
CA-D452TR/D432TR	B/E/EN	18K	68K	220K	82K	USED	USED	USED	USED	NONE	NONE	NONE	NONE
	EE	68K	18K	220K	82K	USED	USED	USED	USED	NONE	NONE	NONE	NONE
MX-D602T	J/C	18K	18K	47K	33K	NONE	NONE	NONE	NONE	USED	NONE	NONE	NONE
CA-D702T	U/UP/US/UT/UX	18K	68K	47K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
	UR	18K	NONE	47K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
	A	18K	68K	47K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
CA-D752TR	B/E/EN	18K	68K	47K	82K	USED	USED	USED	USED	USED	NONE	NONE	NONE
	EE	68K	18K	47K	82K	USED	USED	USED	USED	USED	NONE	NONE	NONE
CA-MXD330		68K	68K	220K	82K	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE



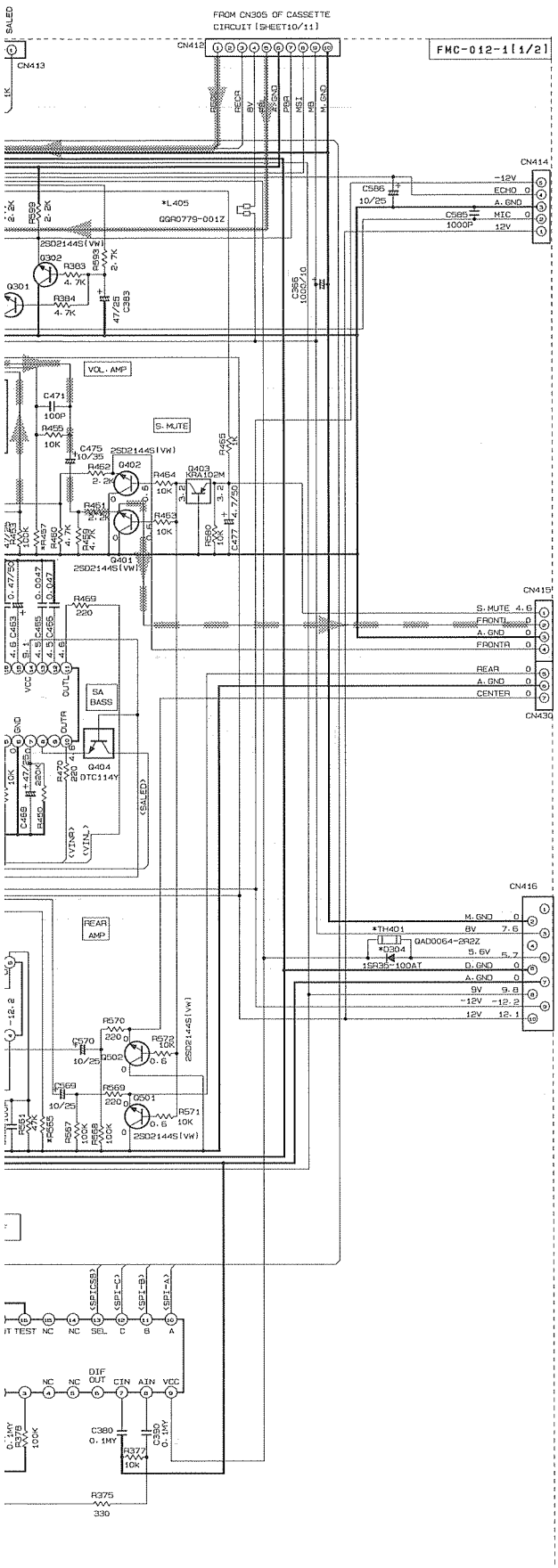
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION —— TAPE PB MODE
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133

Input / Source Selector Section



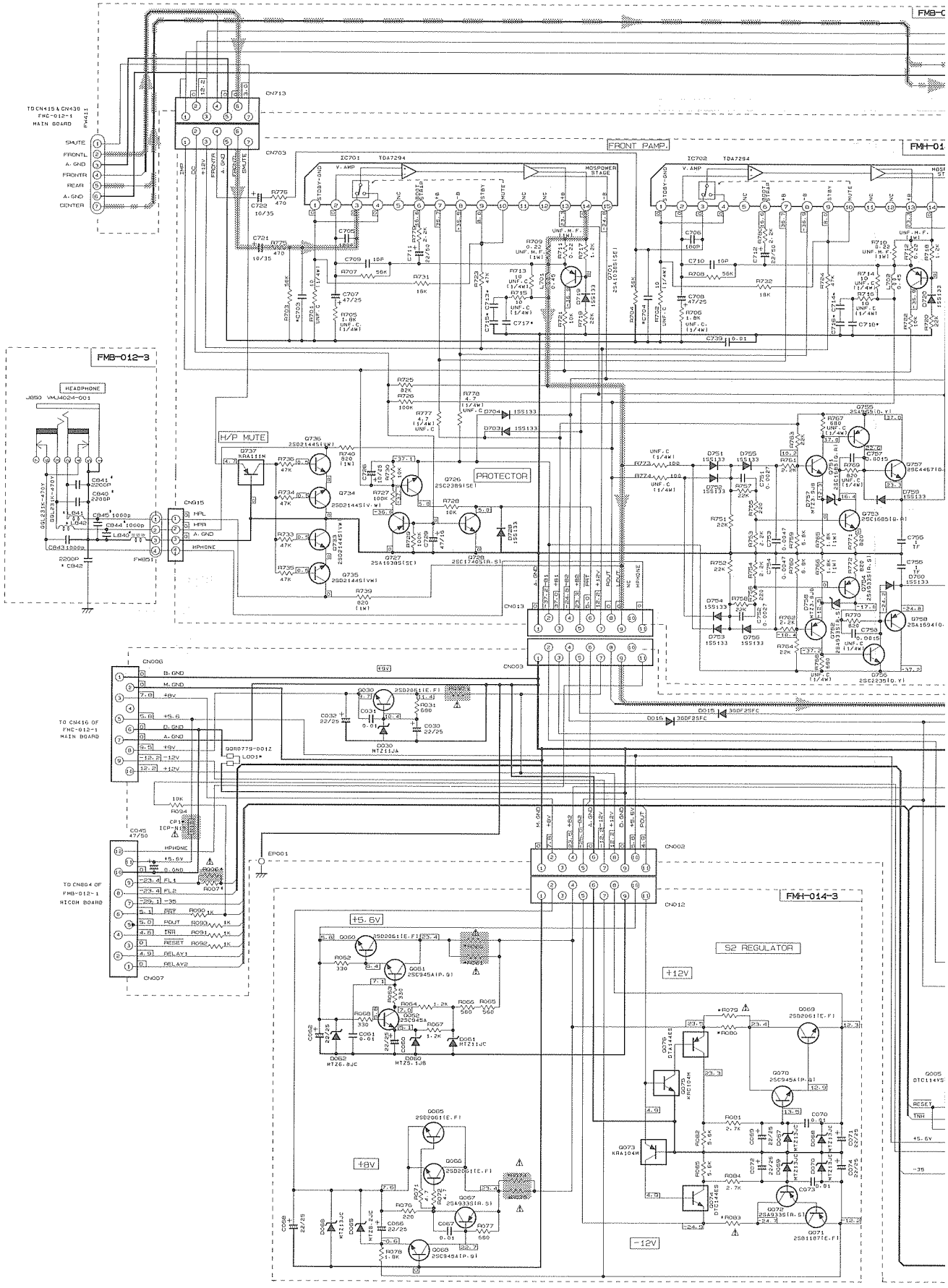
8/11]



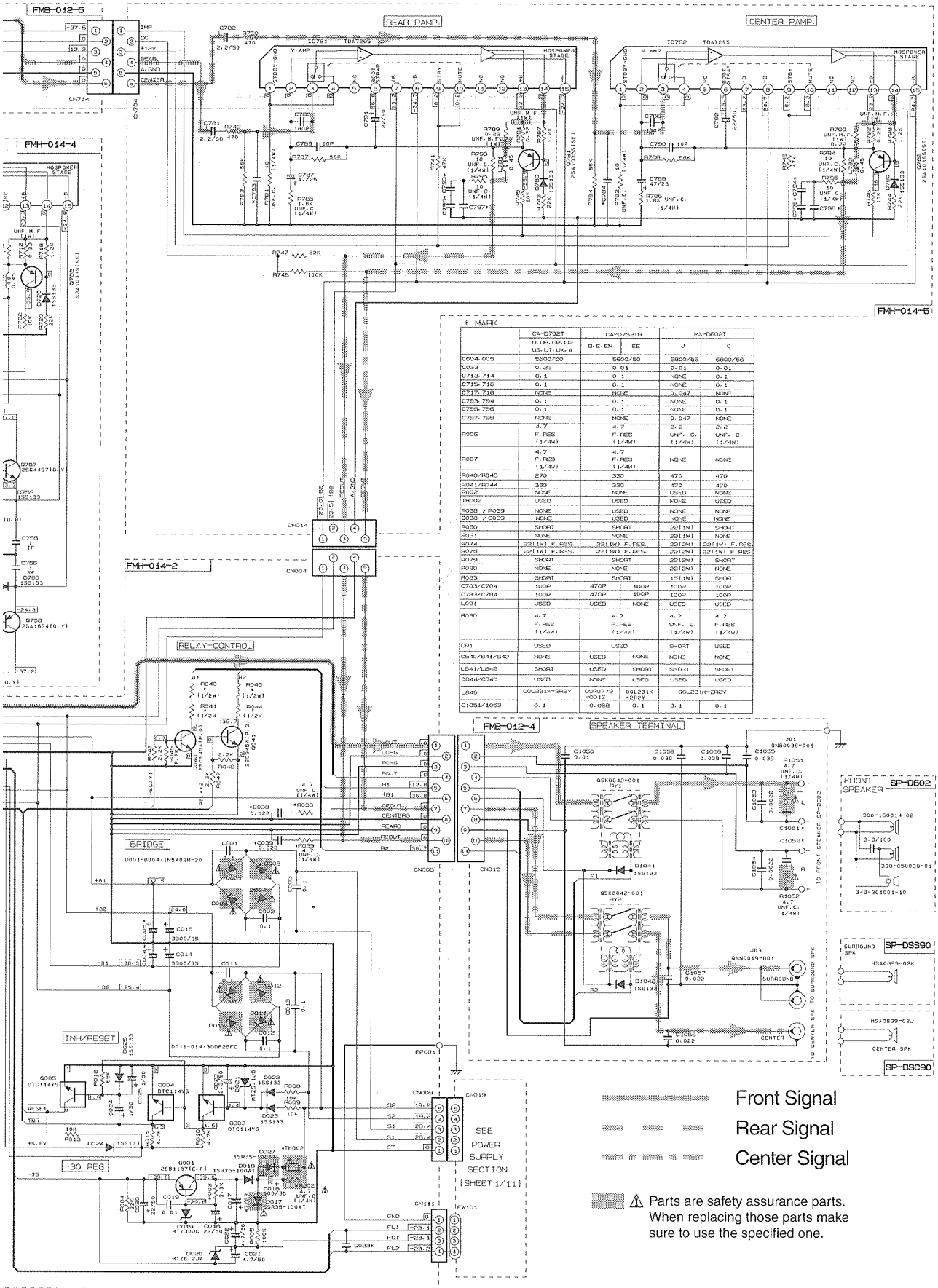
* MARK　　O : USED　X : NONE

FUNC	SYMBOL	MX-D602T		CA-D702T		CA-D752TR	
		J	C	U. US. UP UT. UB	A	B. E. EN	EE
CHARGE	R423-R428	X	X	O	O	X	X
	C439-C440	X	X	O	O	X	X
SWITCH	IC404	O	O	O	O	O	O
	R429-R430	O	O	O	O	O	O
	C441-C442	O	O	O	O	O	O
	D401-D402	O	O	O	O	O	O
	B835/B842	X	X	X	X	X	X
MIC	R443. R444	X	X	O	O	X	X
MIX	R435. R436	4. 7K	4. 7K	8. 2K	8. 2K	4. 7K	4. 7K
GAIN	R457. R458	5. 6K	5. 6K	7. 5K	7. 5K	7. 5K	7. 5K
	R565. R566	1. 3K	1. 3K	1. 6K	1. 6K	1. 6K	1. 6K
	C483	O	O	X	X	X	X
	C583	X	X	X	X	O	X
	C584	0. 01MY	0. 01MY	X	X	0. 01	X
	D304	O	X	X	X	X	X
	TH401	X	O	O	O	O	O
	R362	X	X	X	X	O	O
	C453. C455	X	X	X	X	O	X
	C484	100P	100P	100P	100P	0. 0022	100P
	L402	O	O	O	O	O	SHORT
	L403	O	O	O	O	O	SHORT
	L404	SHORT	SHORT	SHORT	SHORT	O	O
	L405	SHORT	SHORT	SHORT	SHORT	O	SHORT
	R373	1/4W UNF. C. RES	1/4W FUSIBLE RESISTOR				
	C398-C399	O	O	O	O	O	X

Audio Output Section



MX-D602T

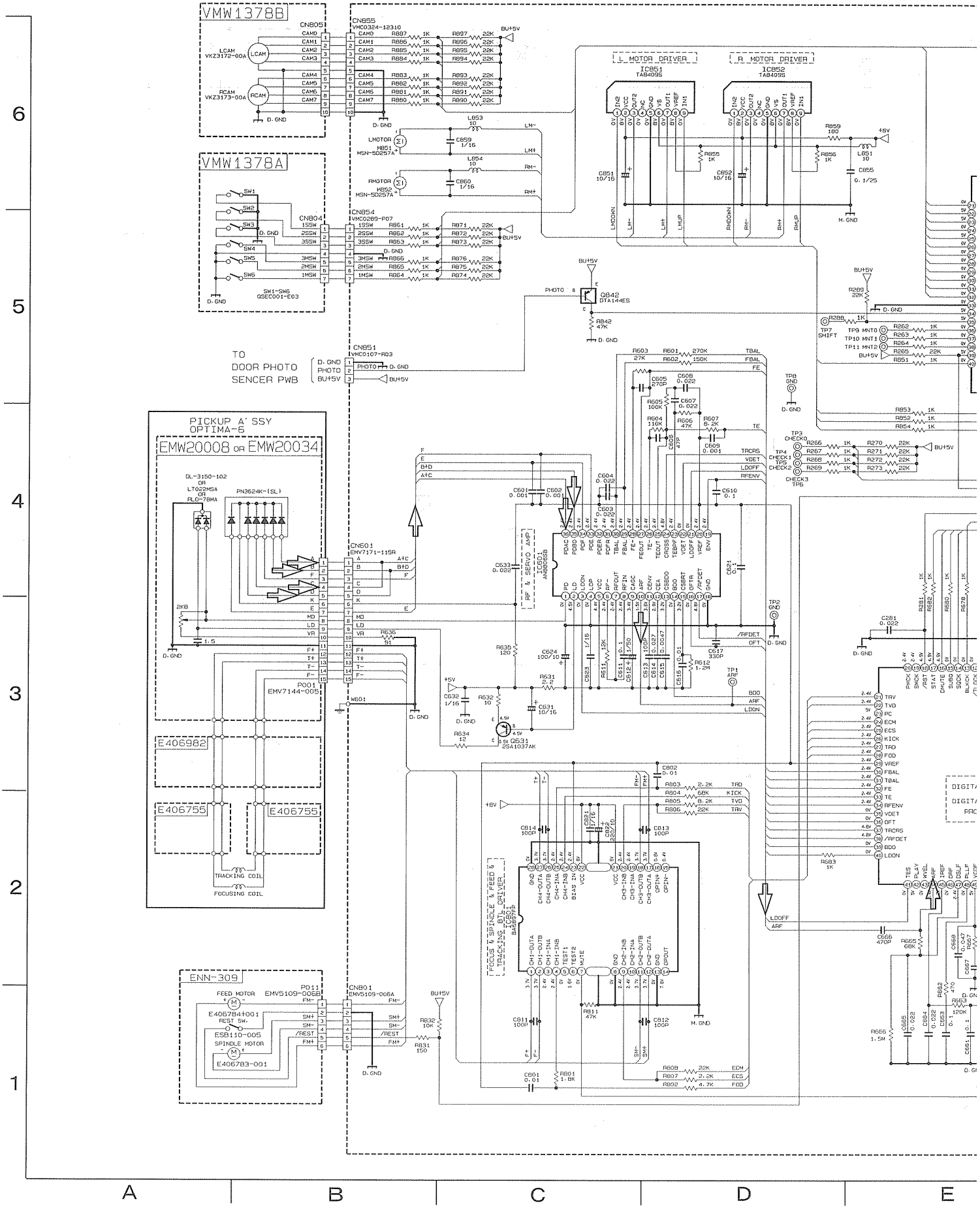


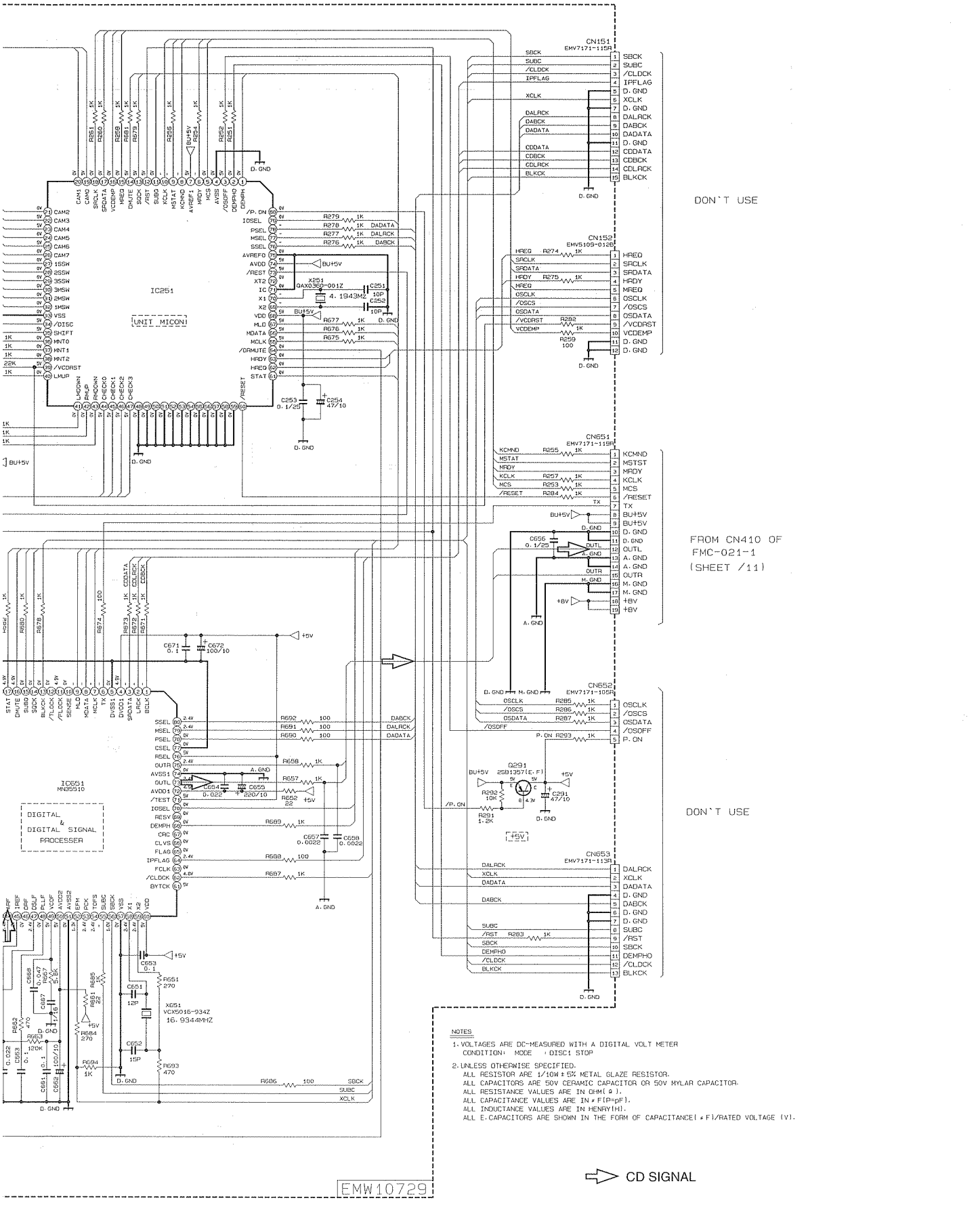
* MARK

	CA-D702T	CA-D752TR		MX-D602T	
	U, UB, UP, UR US, UT, UX, A	B, E, EN	EE	J	C
C004-005	5600/50	5600/50		6800/35	6800/35
C033	0.22	0.01		0.01	0.01
C713-714	0.1	0.1		NONE	0.1
C715-716	0.1	0.1		NONE	0.1
C717-718	NONE	NONE		0.047	NONE
C793-794	0.1	0.1		NONE	0.1
C795-796	0.1	0.1		NONE	0.1
C797-798	NONE	NONE		0.047	NONE
R005	4.7 F.RES (1/4W)	4.7 F.RES (1/4W)		2.2 UNF. C. (1/4W)	2.2 UNF. C. (1/4W)
R007	4.7 F.RES (1/4W)	4.7 F.RES (1/4W)		NONE	NONE
R040/R043	270	330		470	470
R041/R044	330	330		470	470
R002	NONE	NONE		USED	NONE
TH002	USED	USED		NONE	USED
R038 /R039	NONE	USED		NONE	NONE
C038 /C039	NONE	USED		NONE	NONE
R060	SHORT	SHORT		221W	SHORT
R051	NONE	NONE		221W	NONE
R074	22(1W) F.RES.	221(1W) F.RES.		221W	221(1W) F.RES.
R075	22(1W) F.RES.	221(1W) F.RES.		221W	221(1W) F.RES.
R079	SHORT	SHORT		221W	SHORT
R080	NONE	NONE		221W	NONE
R083	SHORT	SHORT		151W	SHORT
C703/C704	100P	470P	100P	100P	100P
C783/C784	100P	470P	100P	100P	100P
L001	USED	USED	NONE	USED	USED
R030	4.7 F.RES (1/4W)	4.7 F.RES (1/4W)		4.7 UNF. C. (1/4W)	4.7 F.RES (1/4W)
CP1	USED	USED		SHORT	USED
C840/841/842	NONE	USED	NONE	NONE	NONE
L841/L842	SHORT	USED	SHORT	SHORT	SHORT
C844/C845	USED	NONE	USED	USED	USED
L840	99L231K-2R2Y	99A0779 -001Z	99L231K -282Y	99L231K-2R2Y	
C1051/1052	0.1	0.068	0.1	0.1	0.1

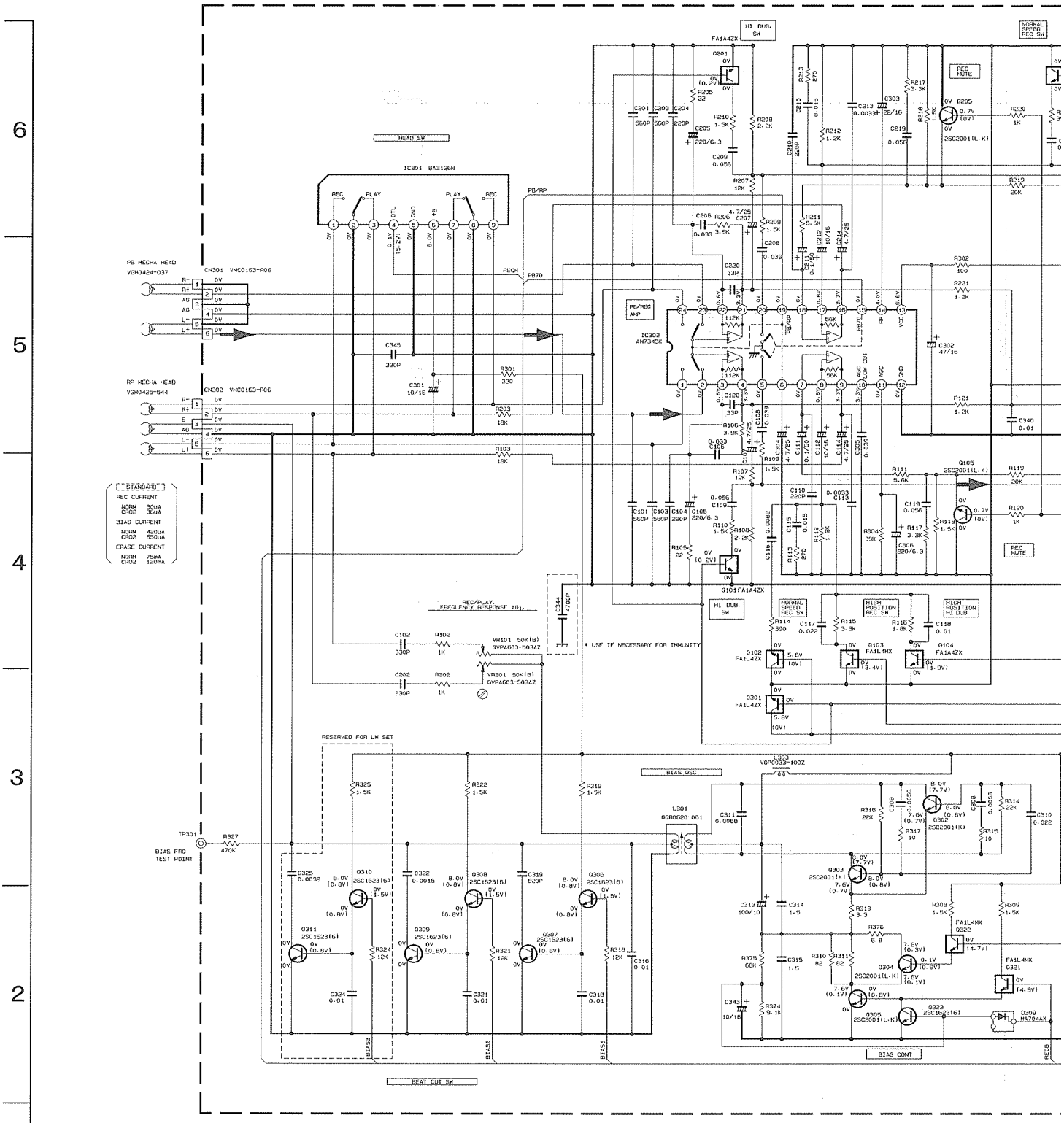
⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

CD Section


VMW1378B
VMW1378A
L MOTOR DRIVER
R MOTOR DRIVER
IC851 TA8409S
IC852 TA8409S
PICKUP A' SSY OPTIMA-6
EMW20008 OR EMW20034
E406982
E406755
E406755
TRACKING COIL
FOCUSING COIL
ENN-309
FEED MOTOR
SPINDLE MOTOR
E406784001
E406783-001
ESB110-005
TO DOOR PHOTO SENCER PWB
RF & SERVO AMP
FOCUS & SPINDLE & FEED & TRACKING BTL DRIVER
DIGITA
DIGITA
PRC
A
B
C
D
E
1
2
3
4
5
6


CN151
EMV7171-115R
SBCK
SUBC
/CLDCK
IPFLAG
D. GND
XCLK
D. GND
DALRCK
DABCK
DADATA
D. GND
CDDATA
CDBCK
CDLRCK
BLKCK
D. GND
DON`T USE
CN152
EMV5109-012R
MREQ
SRCLK
SRDATA
MRDY
MCS
OSCLK
/OSCS
OSDATA
/VCDRST
VCDEMP
D. GND
D. GND
IC251
UNIT MICON
X251
GAX0360-001Z
4. 1943M2
C251
10P
C252
10P
D. GND
BU+5V
R677 1K
R676 1K
R675 1K
C253
0. 1/25
C254
47/10
D. GND
CN654
EMV7171-115R
KCMND
MSTAT
MRDY
KCLK
MCS
/RESET
TX
BU+5V
D. GND
D. GND
OUTL
A. GND
A. GND
OUTR
M. GND
M. GND
M. GND
+8V
+8V
A. GND
FROM CN410 OF
FMC-021-1
(SHEET /11)
C656
0. 1/25
C671
0. 1
C672
100/10
+5V
CN652
EMV7171-105R
D. GND
M. GND
OSCLK
/OSCS
OSDATA
/OSOFF
P. ON
IC651
MN35510
DIGITAL
&
DIGITAL SIGNAL
PROCESSER
Q291
2SB1357(E. F)
R292
10K
C291
47/10
R291
1. 2K
D. GND
DON`T USE
CN653
EMV7171-113R
DALRCK
XCLK
DADATA
DABCK
D. GND
D. GND
SUBC
/RST
SBCK
DEMPHO
/CLDCK
BLKCK
D. GND
X651
VCX5016-934Z
16. 9344MHZ
C651
12P
C652
15P
C653
0. 1
R651
270
R652
470
R653
120K
R654
270
R655
1K
R656
22
R693
470
R694
1K
C661
0. 1
C662
100/10
C663
0. 1
C664
0. 022
C665
0. 047
C666
0. 047
C667
1/16
D. GND
R686 100 SBCK
SUBC
XCLK
NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER
CONDITION: MODE : DISC1 STOP
2. UNLESS OTHERWISE SPECIFIED.
ALL RESISTOR ARE 1/10W ± 5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITANCE VALUES ARE IN ± F(P=pF).
ALL INDUCTANCE VALUES ARE IN HENRY(H).
ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(± F)/RATED VOLTAGE (V).
CD SIGNAL
EMW10729

Tape Section

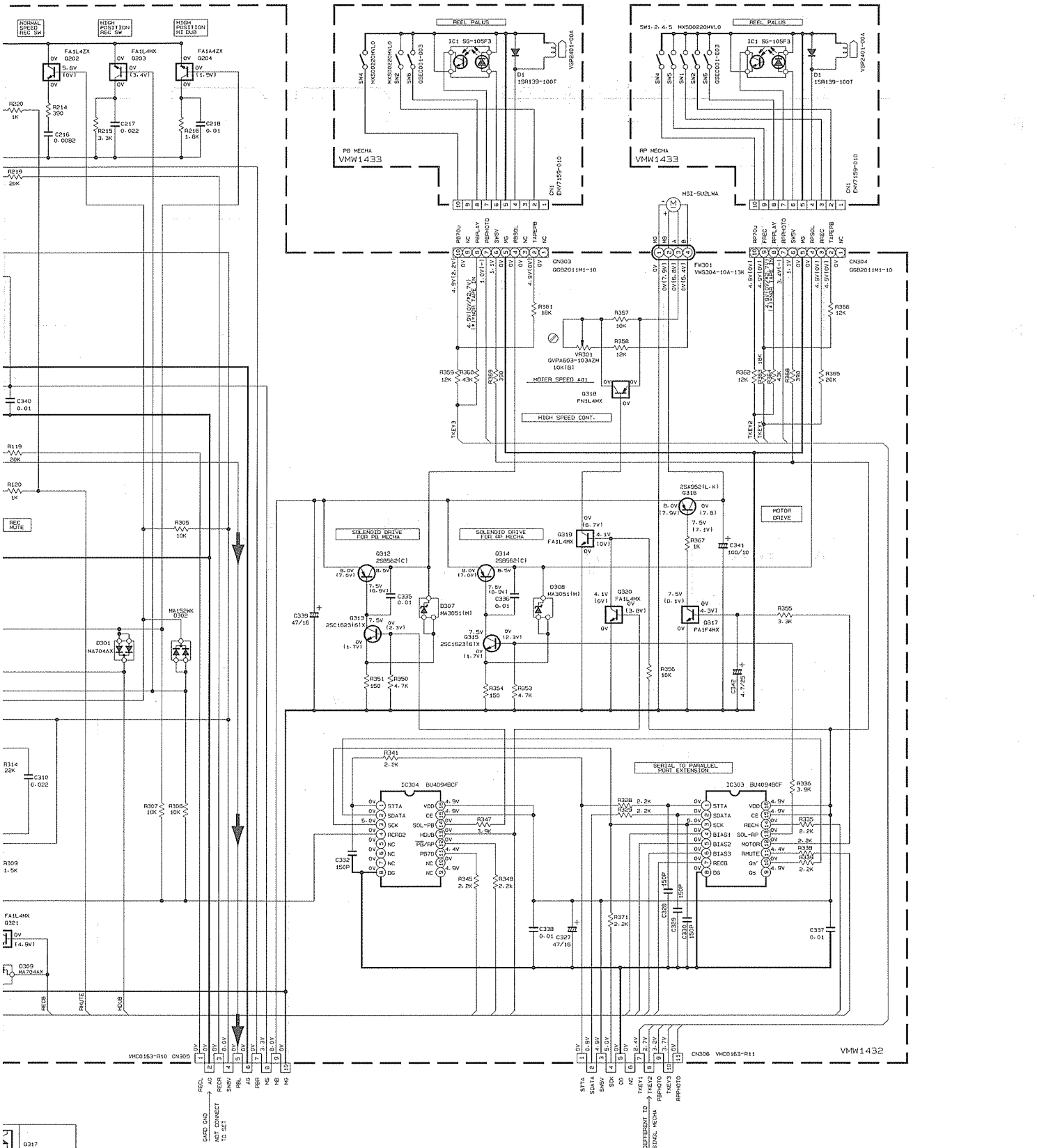


NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. ( ) IS INVERT MODE
2. UNLESS OTHERWISE SPECIFIED
   - ALL RESISTANCE VALUES ARE IN OHM(Ω).
   - ALL CAPACITORS ARE CERAMIC CAPACITOR
   - ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   - ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   - ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   - PP PLYPROPYLENE CAPACITOR

TABLE 1. DIGITAL TR LIST

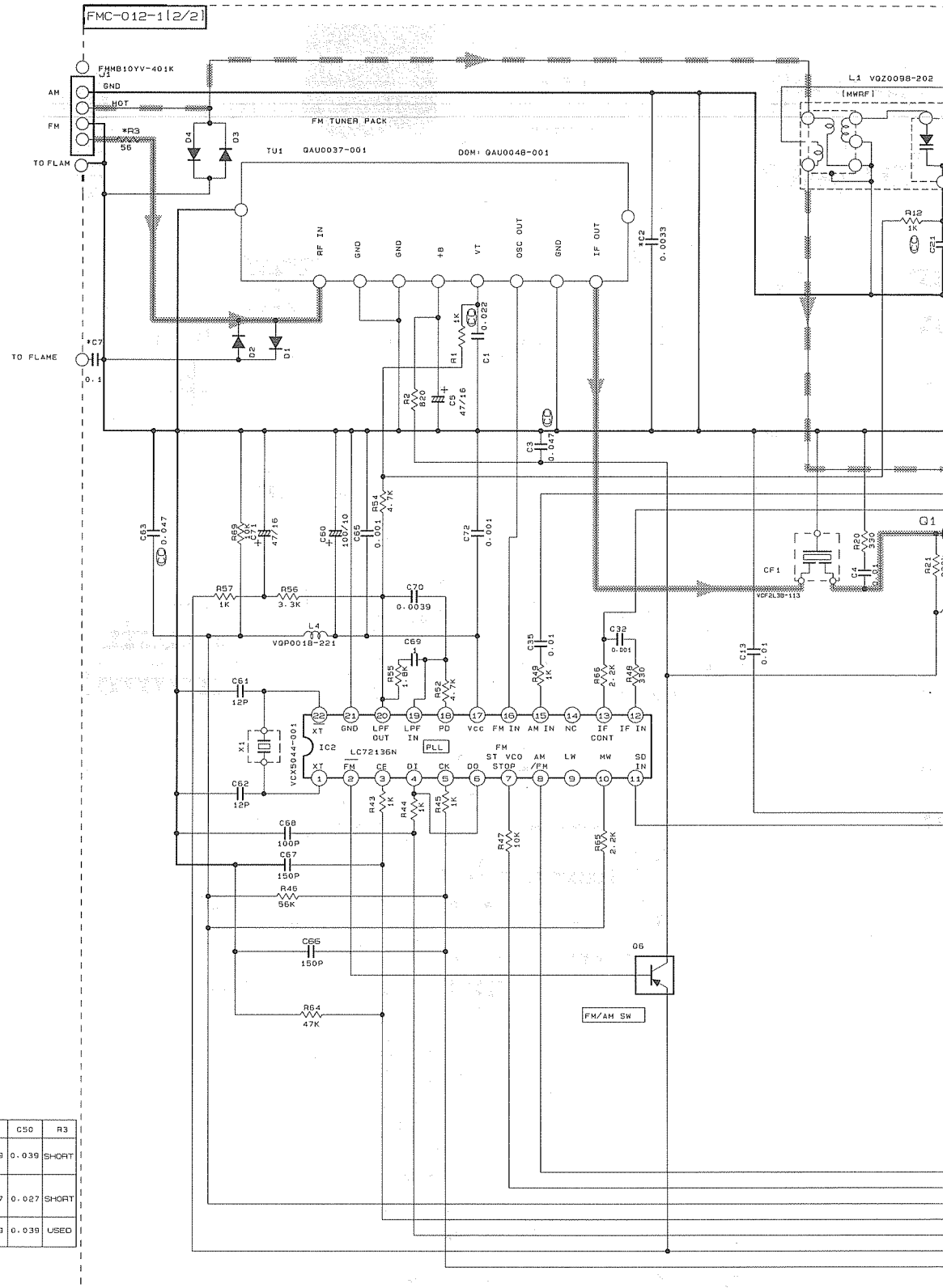
PART NO	CONSTRUCTION	REF NO	PART NO	CONSTRUCTION	REF NO
FN1L4H	47K 47K	Q318	FA1F4M	22K 22K	Q317
FA1A4Z	10K	Q101/Q201 Q104/Q204	FA1L4M	47K 47K	Q103/Q203 Q319 Q320/Q321
FA1L4Z	47K	Q102/Q202 Q301			



0317	
0103/0203	
0319	
0320/0321/0322	

E | F | G | H | I

Tuner Section



*MARK

	C2·C7	C49	C50	R3
J·C	USED	0.039	0.039	SHORT
DOM	SHORT	0.027	0.027	SHORT
U·A	SHORT	0.039	0.039	USED

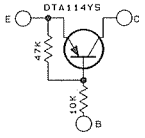
	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC1	FM NO SIGNAL	2.0	0.5	0	2.0	5.2	5.2	0	0	0.2	5.2	5.2	1.0	1.0	4.6	3.8	3.8	1.4	0	1.3	1.1	2.0	2.0	5.2	2.0
	FM 60dB STEREO	2.0	0.5	0	2.0	5.2	5.2	1.1	0	0.2	0	0	1.0	1.0	4.5	4.1	3.9	1.4	0	1.2	1.1	2.0	2.0	5.2	2.0
	AM NO SIGNAL	2.0	0.5	0	2.0	5.0	5.2	0	0	0.2	5.2	5.2	1.0	1.0	4.8	2.2	0	1.4	1.4	1.5	1.6	2.0	2.0	5.2	2.0
IC2	FM NO SIGNAL	2.7	0	0	4.9	4.9	4.9	3.8	3.8	2.0	4.1	5.2	0	0	0	0	2.6	5.2	1.0	1.0	3.7	0	2.7		

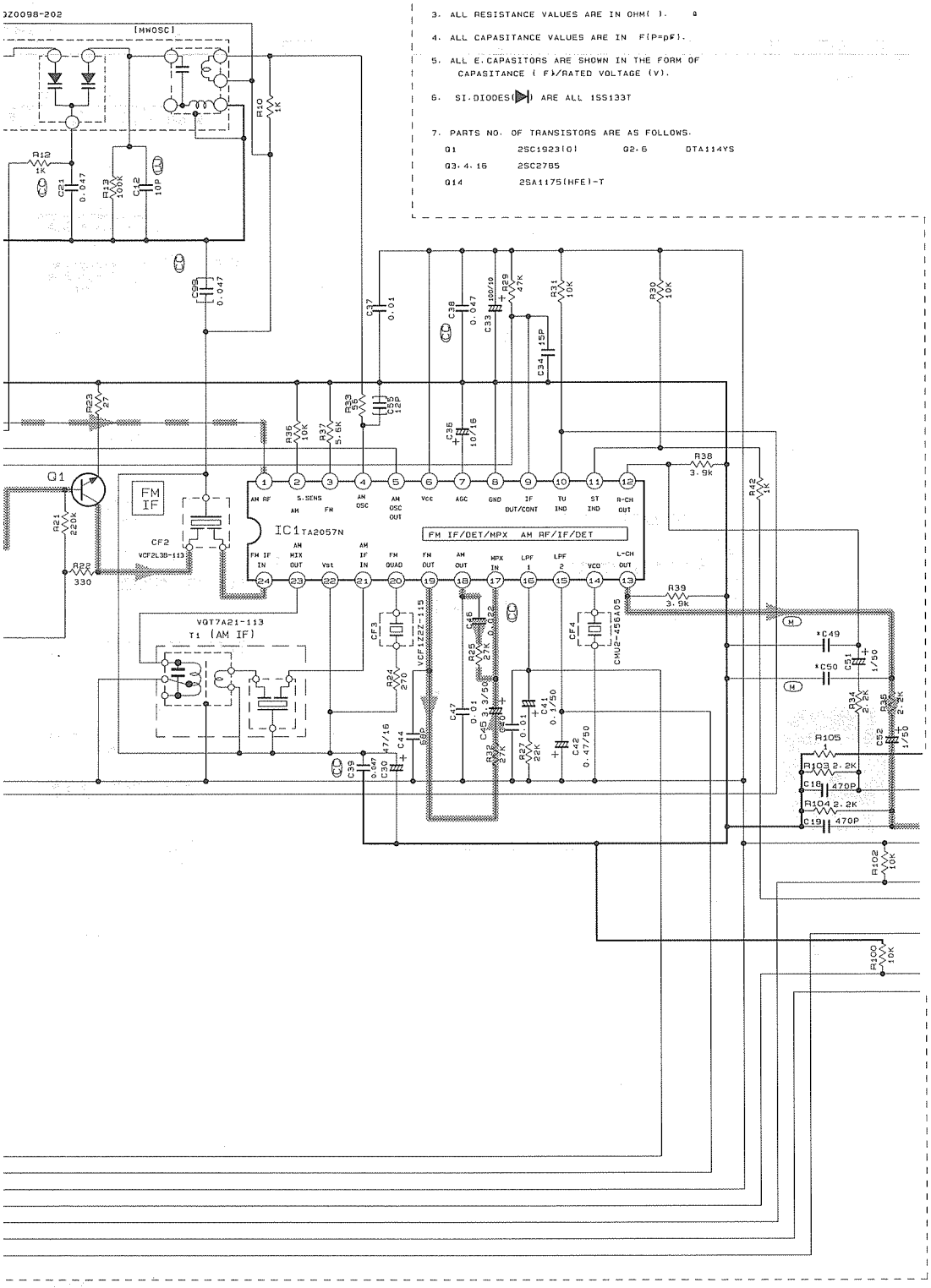
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM( ).
4. ALL CAPASITANCE VALUES ARE IN F(P=pF).
5. ALL E.CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (F)/RATED VOLTAGE (V).
6. SI.DIODES(▷|) ARE ALL 1SS133T
7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS.

Q1	2SC1923(O)	Q2.6	DTA114YS
Q3.4.15	2SC2785		
Q14	2SA1175(HFE)-T		

8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.





Tr NO.	Q1			Q6			Q16		
PIN NO.	E	C	B	E	C	B	E	C	B
FM 87.5MHz NO SIGNAL	0	8.3	0.8	9.8	9.7	0	1.0	3.5	1.6
AM 522KHz NO SIGNAL	0	0	0	9.8	0	9.7	1.0	3.5	1.6
Tr NO.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	2.0	2.0	0.1	0	0	0.7	0	0	0.7
AM 144KHz NO SIGNAL	2.0	2.0	2.0	0	0	0.1	0	0	0.1

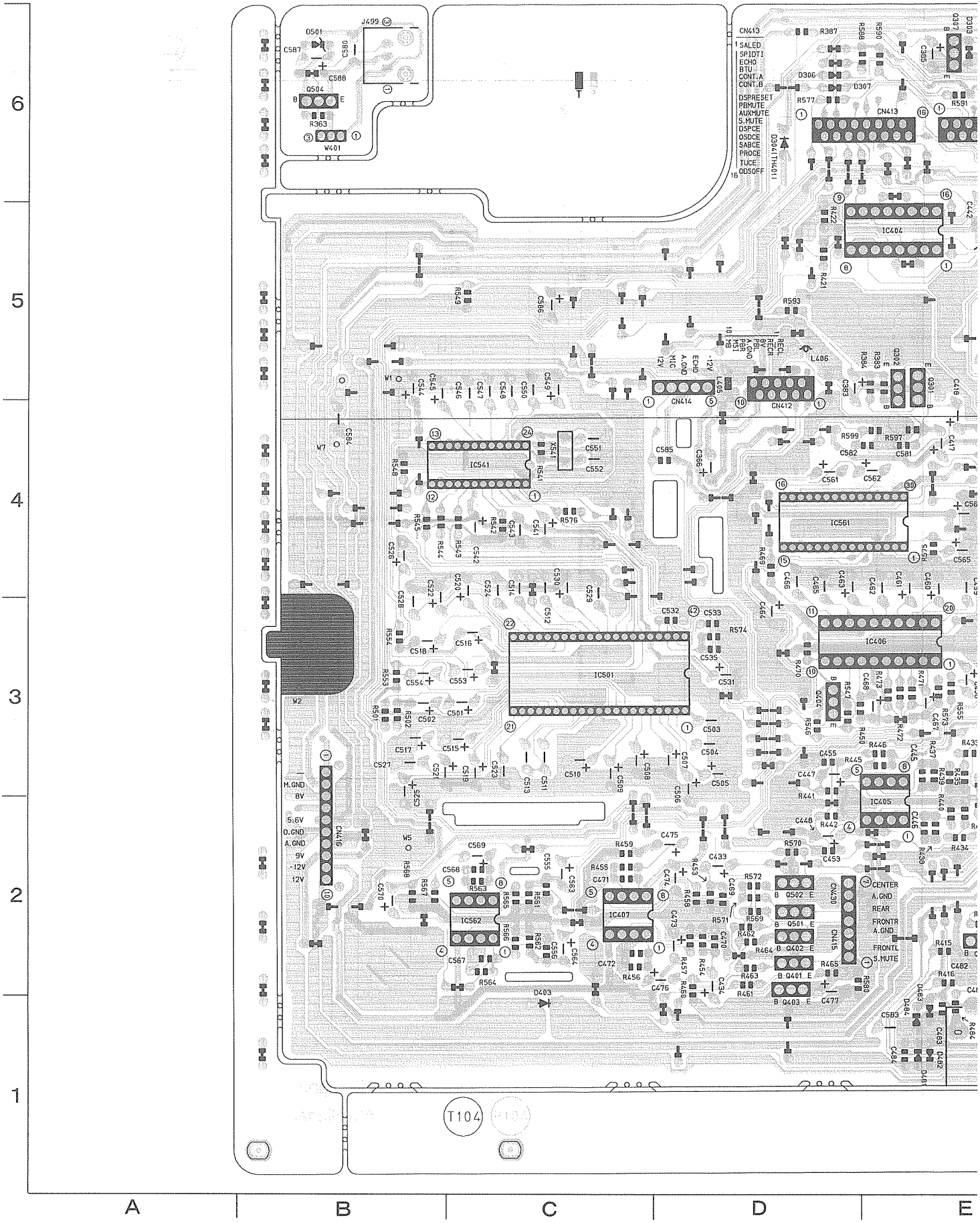
FM Signal

AM Signal

E | F | G | H | I

Printed Circuit Board

■ Main Board


6
5
4
3
2
1
A
B
C
D
E
T104
IC404
IC405
IC406
IC407
IC501
IC541
IC561
IC562
CN412
CN413
CN414
CN415
CN416
CN430
W401
J499
D501
Q504
R363
C587
C588
C560
T
D306
D307
D304
TH4011
R577
R591
R387
R568
R550
D309
D308
C395
R222
C442
R421
R593
L406
L405
Q302
Q301
R384
R383
C383
C418
C586
R543
C584
W1
W7
W2
W5
C545
C546
C547
C548
C550
C549
C544
MIC
ECHO
A.GND
12V
-12V
RECL
RECR
PBL
PBR
MB
MB
A.GND
C551
C552
X541
R548
R541
C585
C366
R599
R597
C582
C581
C417
C561
C562
R576
C541
C542
C543
R542
R544
R545
C526
C528
C522
C520
C524
C514
C530
C529
C512
C532
C533
R574
C535
C531
C516
C518
R554
R553
C554
C553
C517
C515
C527
C521
C519
C523
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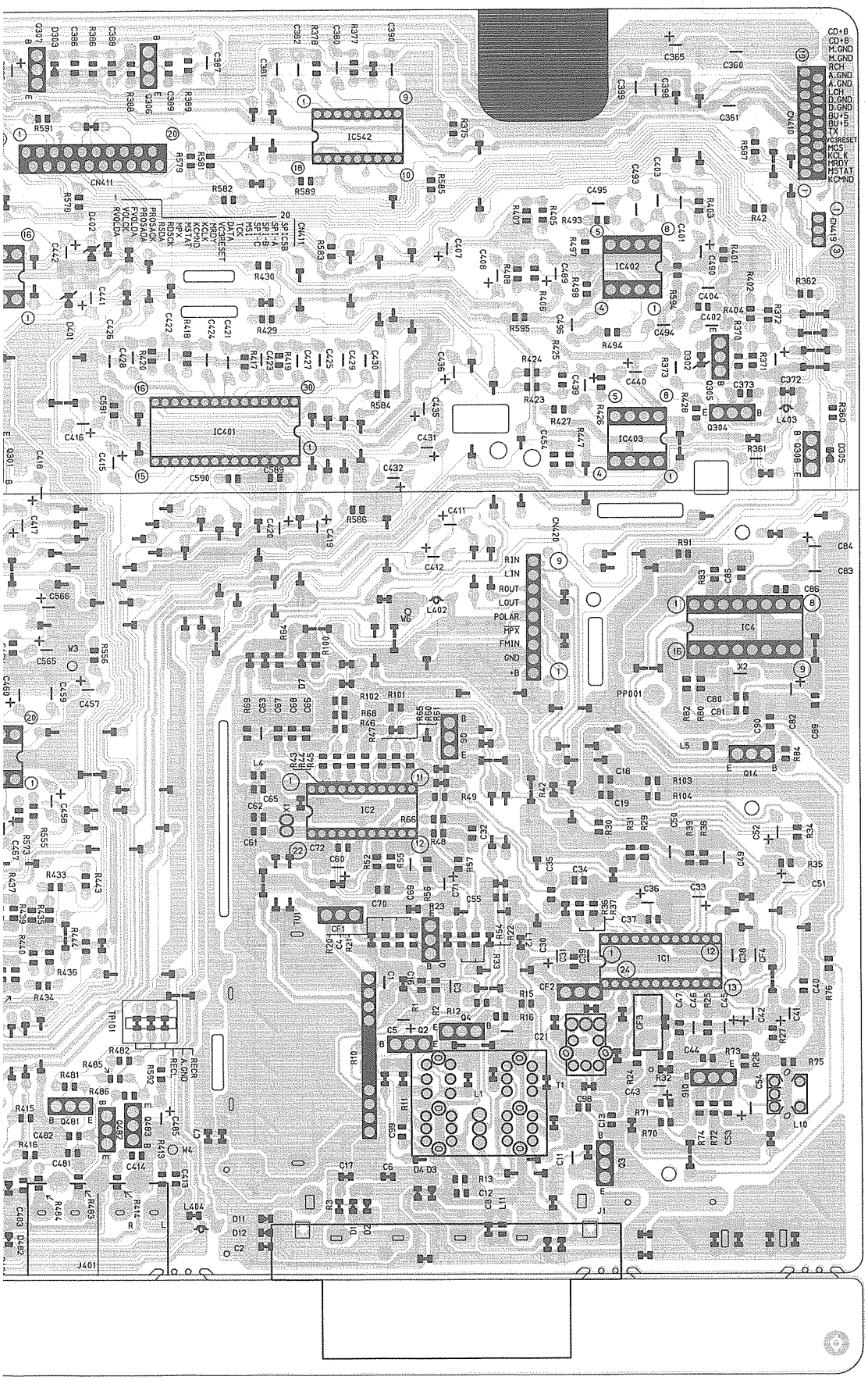
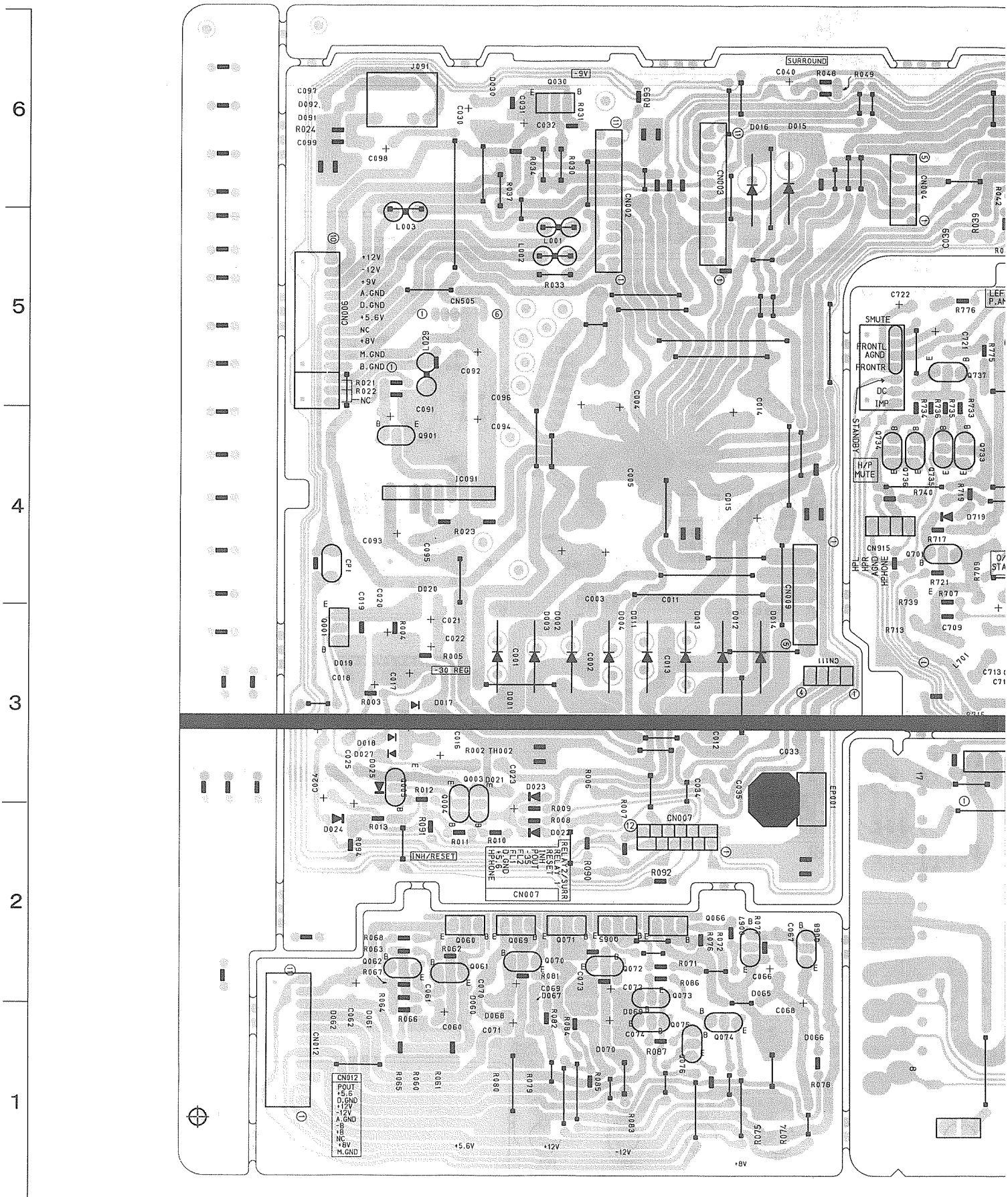
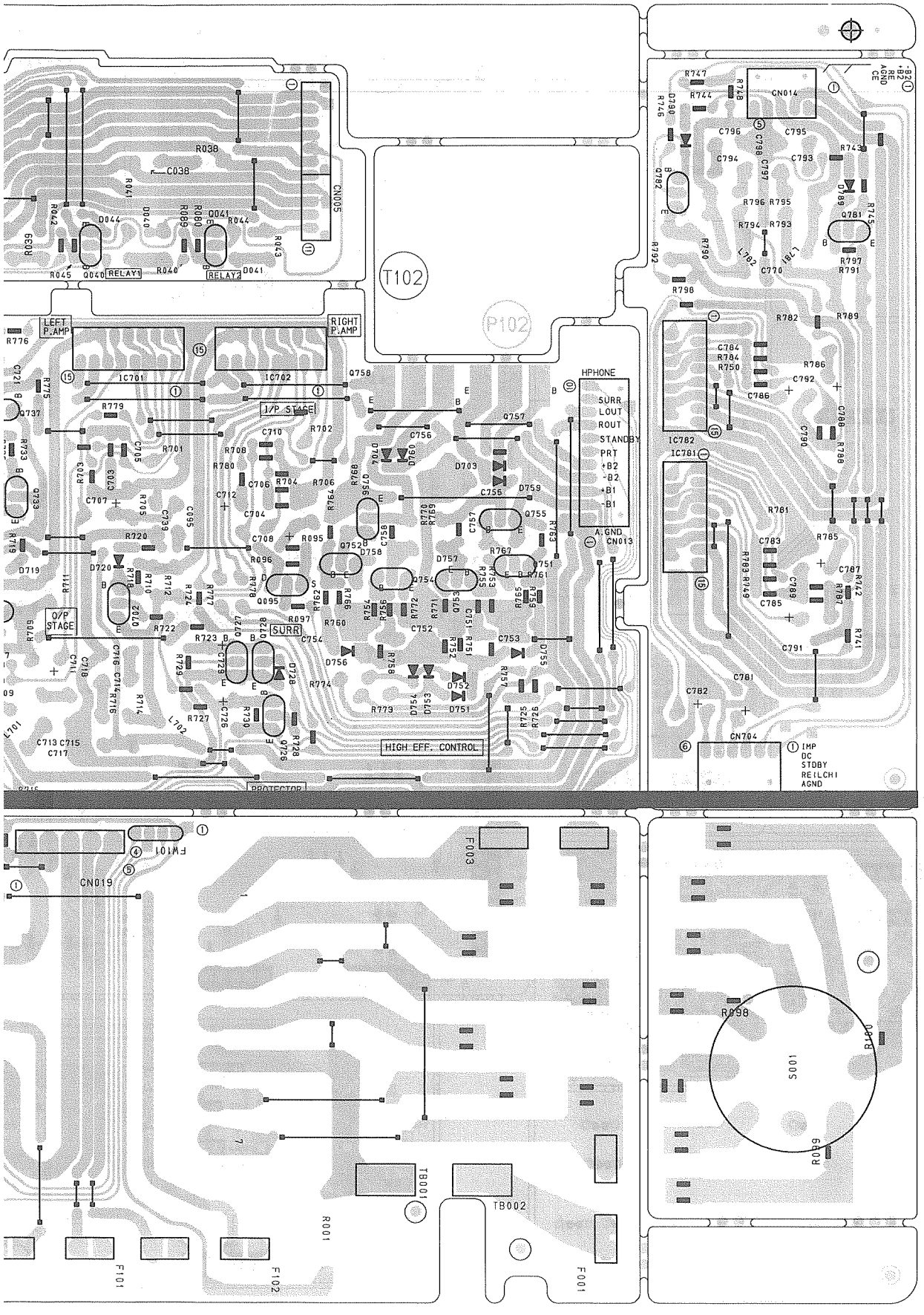
MX-D602T



E | F | G | H | I

■ Power Amplifier Board

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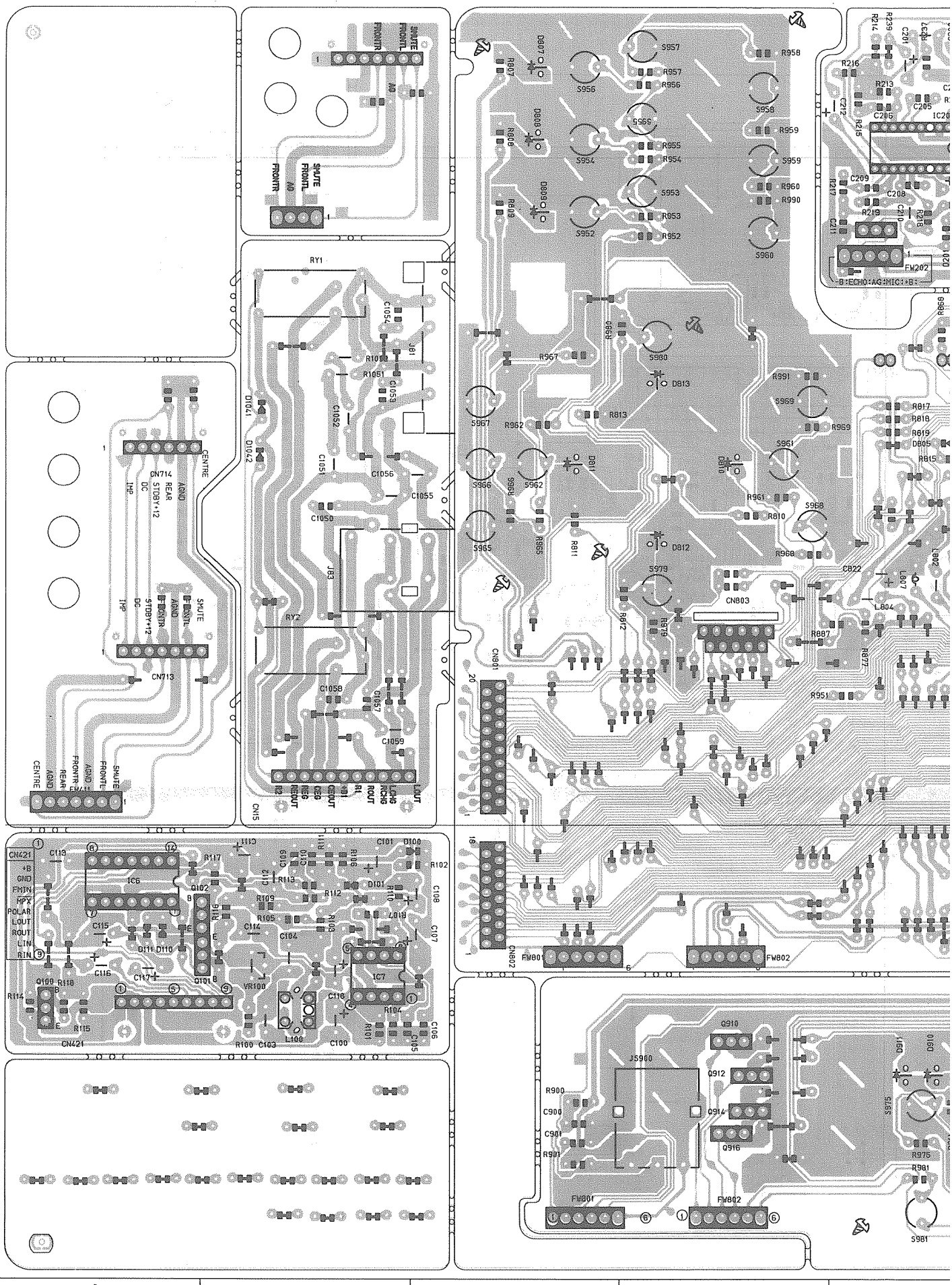
RIGHT P.AMP
I/P STAGE
O/P STAGE
SURR
HIGH EFF. CONTROL
PROTECTOR
RELAY1
RELAY2
HPHONE
SURR
LOUT
ROUT
STANDBY
PRT
+B2
-B2
+B1
-B1
A.GND
CN013
IMP
DC
STDBY
REILCHI
AGND
T102
P102
IC701
IC702
IC781
IC782
CN005
CN014
CN019
CN704
FW101
TB001
TB002
F001
F003
F101
F102
S001

System Control Operation Switch Board

MX-D602T MX-



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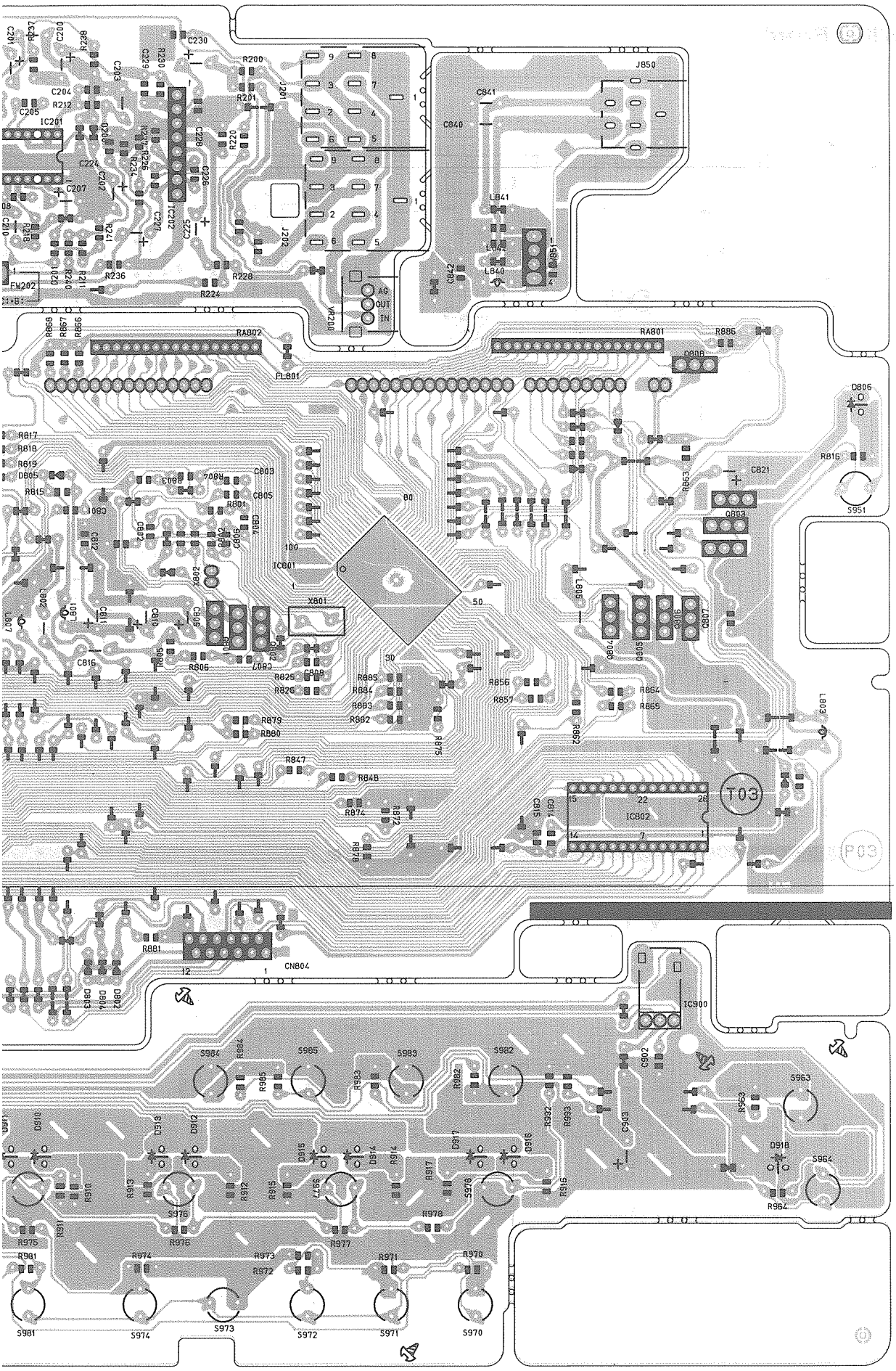
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S963
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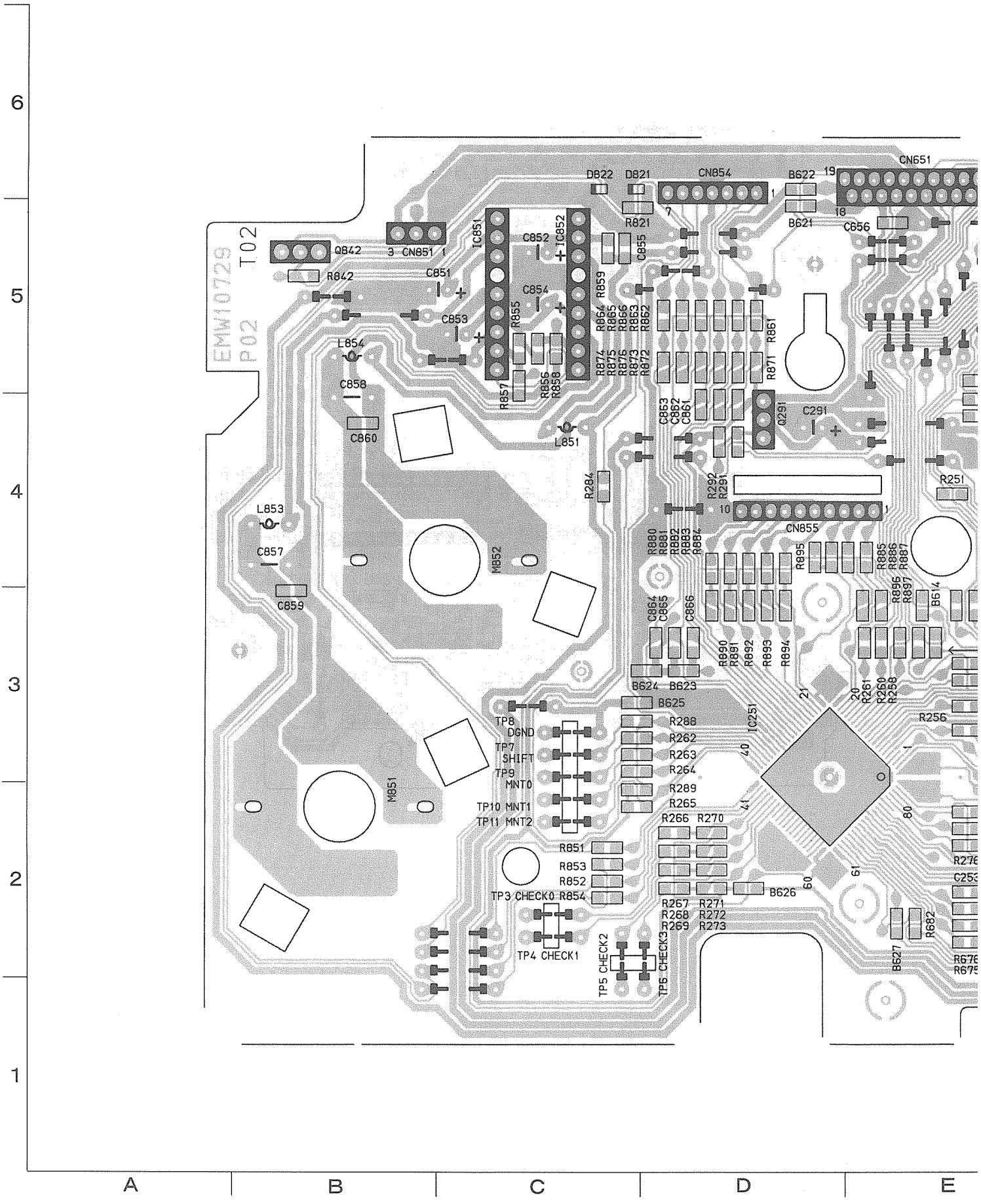
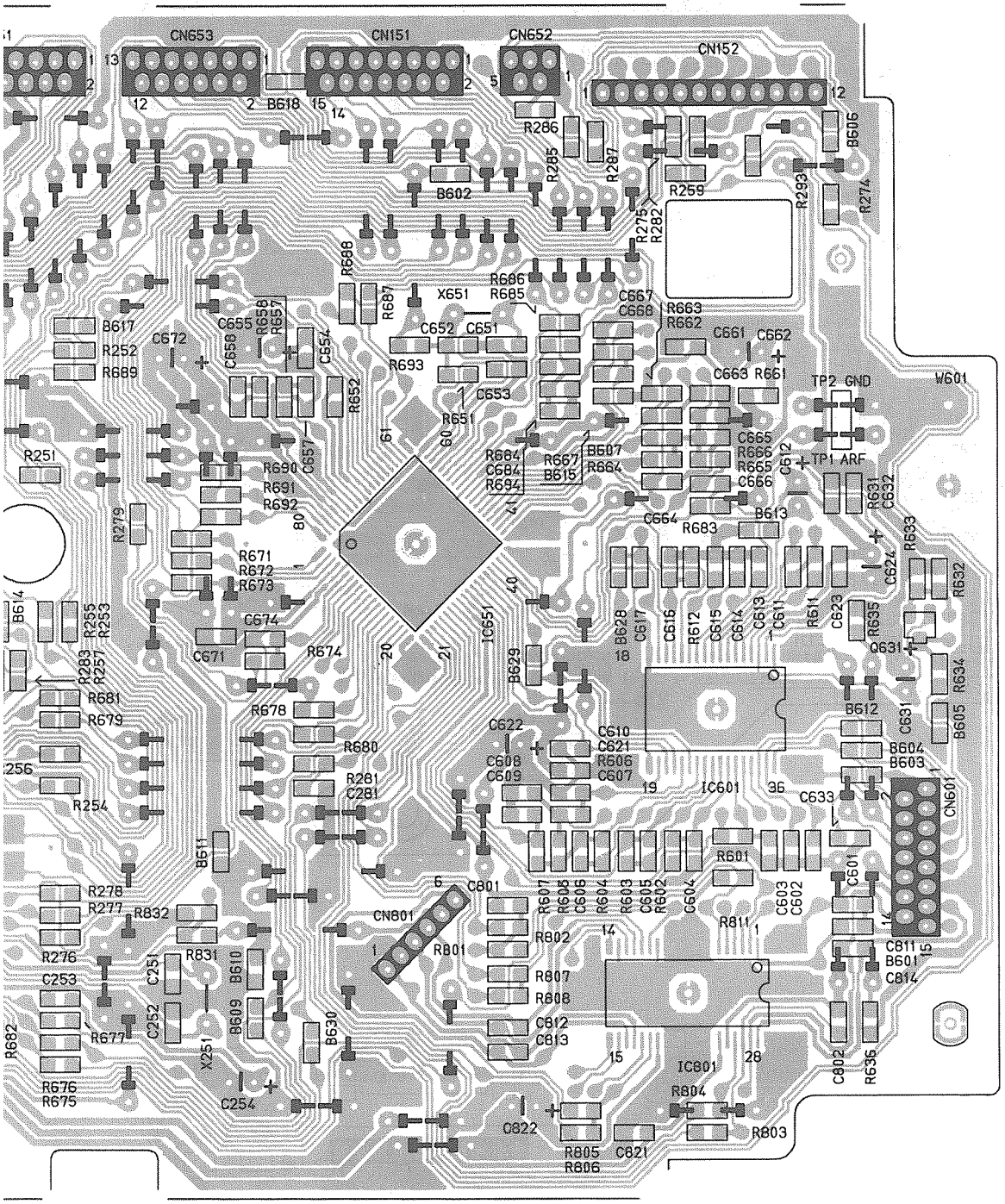
CD Servo Changer Mechanism Control Board

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B605
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R678
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C621
R606
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R680
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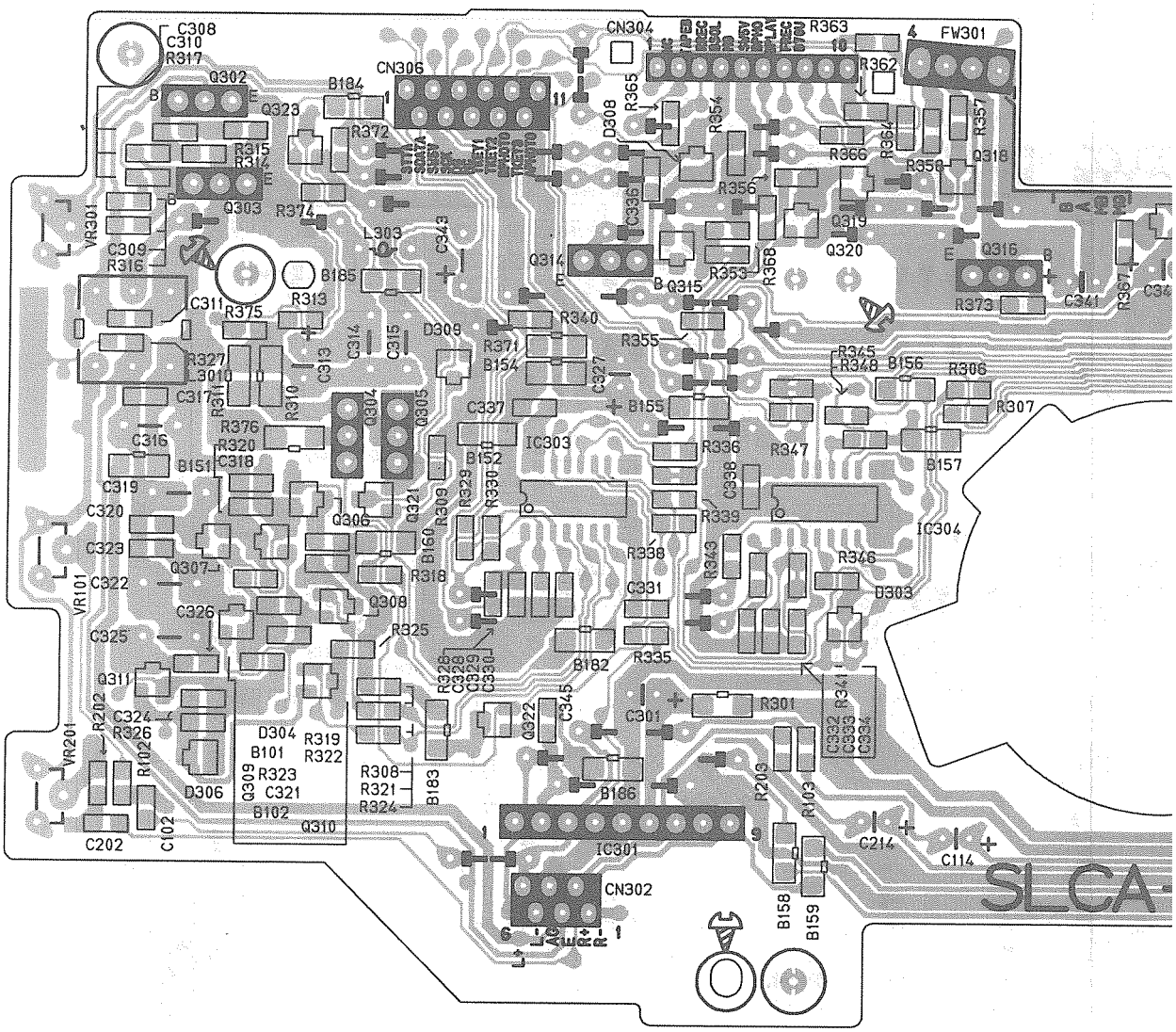
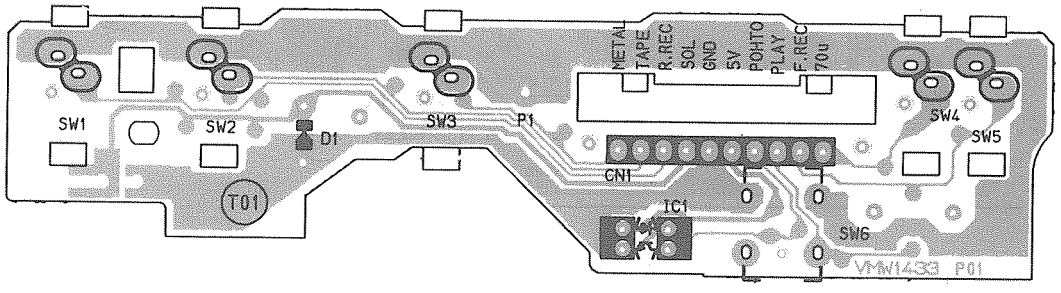
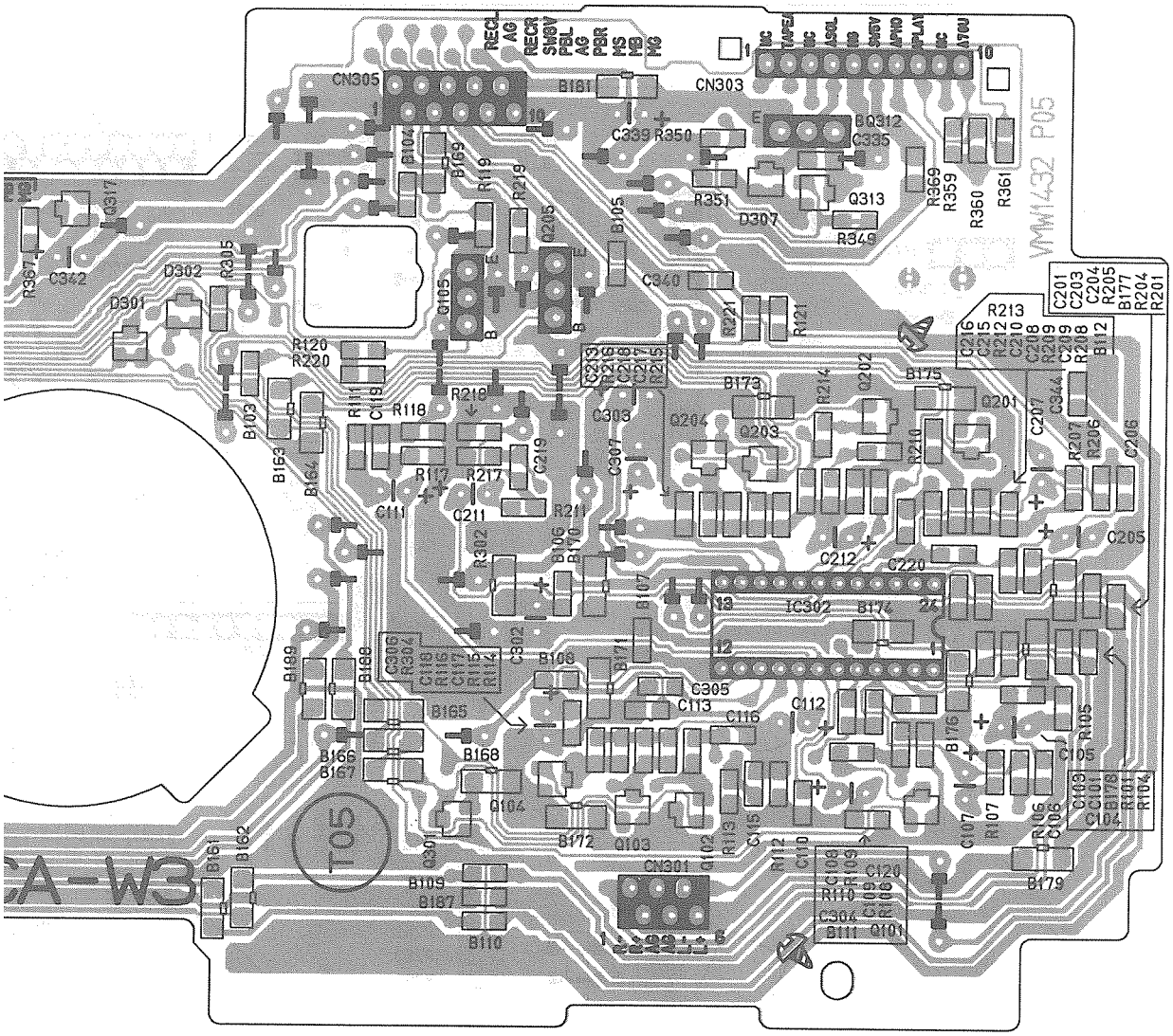
Head Amplifier Mechanism Control Board & Reelpulse Board

Head Amplifier Mechanism Control Board



ReelPulse Board

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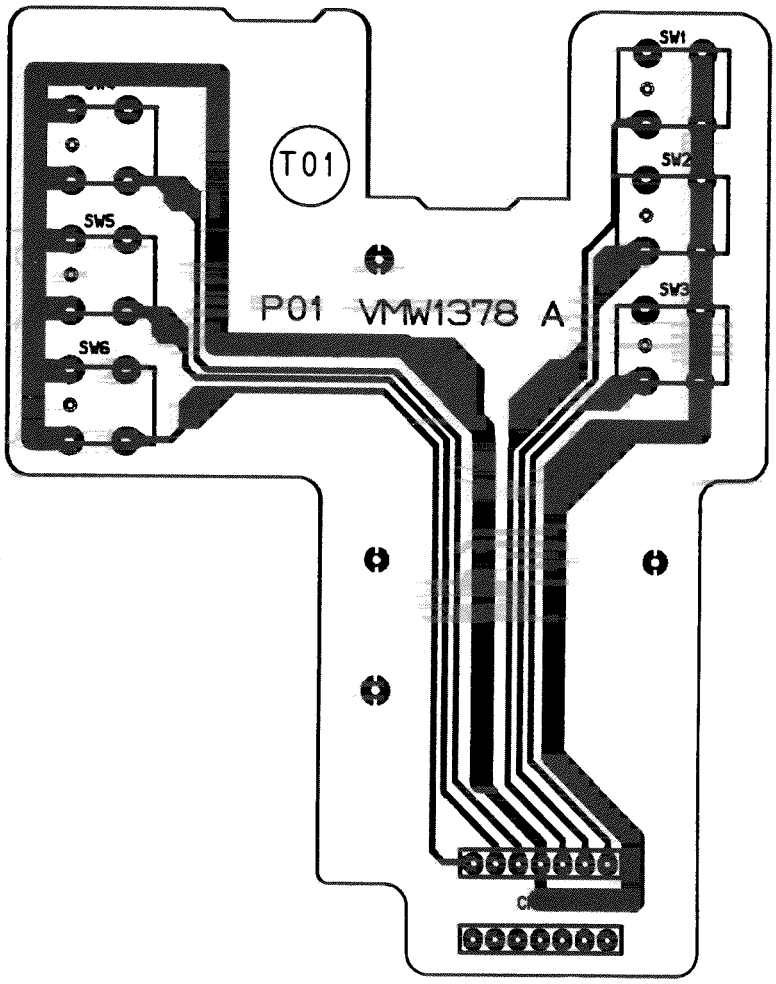
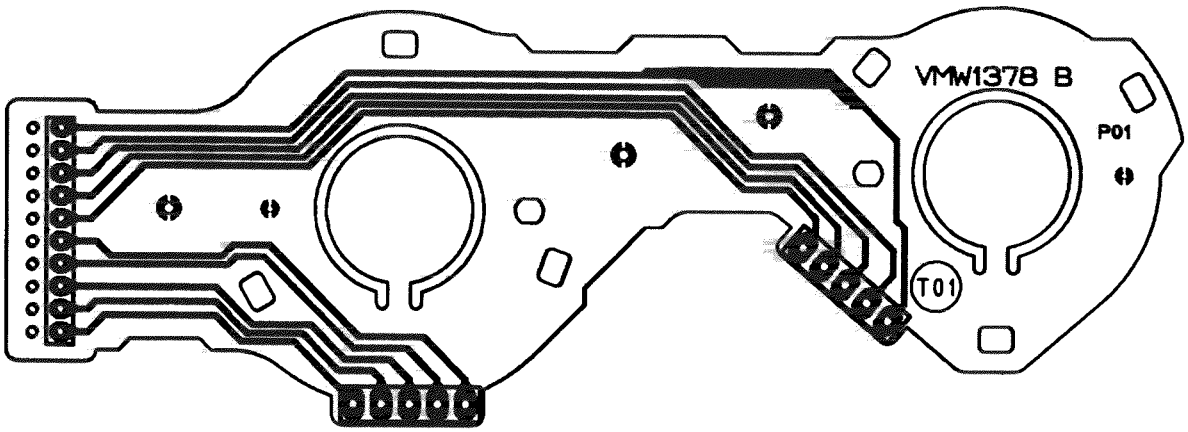
T05

■ CD Tray Select Board & Cam Switch Board

■ CD Tray Select Board



■ **Cam Switch Board**



PARTS LIST

[MX—D602T]

Unit No. CA—D602T
SP—D602T

J／C

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix

J —— the U. S. A
C --- Canada

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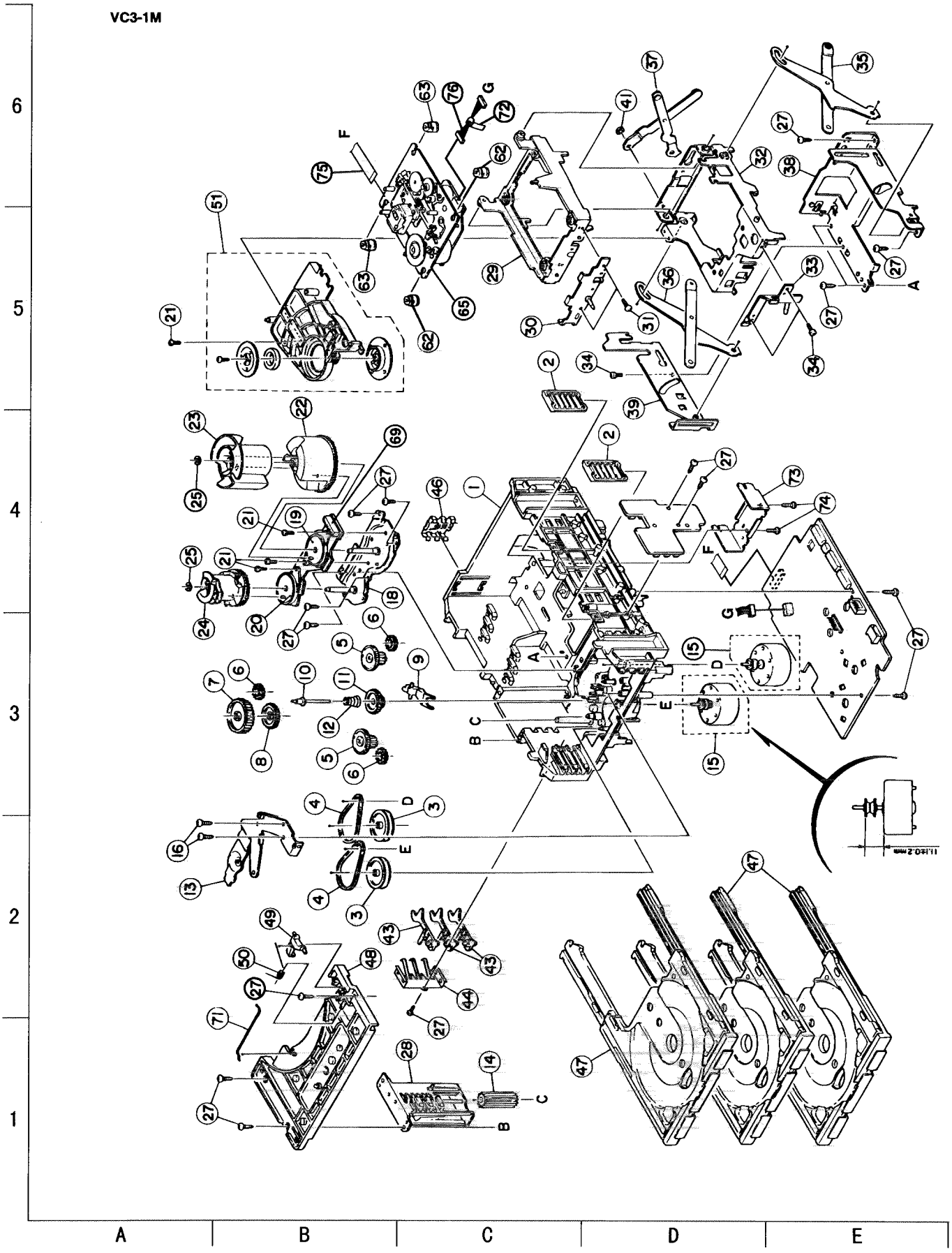
BLOCK NO. M2MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	VKS1144-003	CHASSIS		1		
	2	VKS3698-003	TRAY GUIDE		2		
	3	VKS5532-003	PULLEY GEAR		2		
	4	VKB3000-164	BELT		2		
	5	VKS5505-003	GEAR B		2		
	6	VKS5506-002	GEAR C		3		
	7	VKS5507-002	CROSS GEAR U		1		
	8	VKS5508-002	CROSS GEAR L		1		
	9	VKS5510-003	SELECT LEVER		1		
	10	VKH5769-001	S.G.SHAFT		1		
	11	VKS5511-002	SELECT GEAR		1		
	12	VKW5155-003	COMP.SPRING	FOR SELECT GEAR	1		
	13	VKM3846-002	GEAR BRACKET		1		
	14	VKS5509-002MM	CYLINDER GEAR		1		
	15	MSN5D257A-SA2	DC MOTOR ASS'Y		2		
	16	DPSP2616Z	SCREW	FOR MOTOR	2		
	18	VKM3825-00AMM	C.G.BASE ASS'Y		1		
	19	VKZ3172-00A	CAM SW. R ASS'Y		1		
	20	VKZ3173-00A	CAM SW. L ASS'Y		1		
	21	SPST2606Z	SCREW		4		
	22	VKS2263-002MM	CAM R1		1		
	23	VKS2264-002MM	CAM R2		1		
	24	VKS2265-002MM	CAM GEAR L		1		
	25	WDL316050	SLIT WASHER		2		
	27	SBSF2608Z	T.SCREW		16		
	28	VKS3702-00FMM	DRIVE UNIT		1		
	29	VKS2247-004	MECHA HOLDER A		1		
	30	VKL7767-00B	BRACKET ASS'Y		1		
	31	SBSF2606Z	SCREW	FOR BRACKET	2		
	32	VKM3860-00A	M.HOLDER B AS'Y		1		
	33	VKL7802-00C	M.HOLDER C AS'Y		1		
	34	SDST2604Z	SCREW		3		
	35	VKL7810-00A	LIFTER ASS'Y R		1		
	36	VKL7811-00A	LIFTER ASS'Y L		1		
	37	VKL7812-00A	LIFTER ASS'Y H		1		
	38	VKL2732-002	LIFTER BASE		1		
	39	VKM3823-001	LIFTER BRACKET		1		
	41	WDL266035-2	SLIT WASHER		1		
	43	VKS5514-002MM	LOCK LEVER		3		
	44	VKY3133-002MM	RETURN SPRING		1		
	46	VKY3134-003MM	CLICK SPRING		1		
	47	VKS2252-00EKP	TRAY ASS'Y		3		
	48	VKS2250-003	TOP BRACKET		1		
	49	VKS5515-002	S.TRAY STOPPER		1		
	50	VKW5156-004	TORSION SPRING		1		
	51	VKS3703-00FMMKP	CLAMPER ASS'Y		1		
	62	FMYH4003-002	INSULATOR		2		
	63	FMYH4003-001	INSULATOR		2		
	65	----------	CD MECHA.ASS'Y		1		
	69	QGB2021L1-10	CONNECTOR		1		
	71	VKW5187-001	ROD		1		
	72	VYSA1R2-033	SPACER	FOR EWS176-008	1		
	73	LE30611-001AKP	C.B HOLDER	FOR CD CB	1		
	74	SBSF3008Z	SCREW	FOR HOLDER	2		
	75	QUQ110-1509AJ	FLAT WIRE	TRAVERSE 15	1		
	76	EWS176-008	FLAT WIRE	TRAVERSE 6	1		

CD Changer Mechanism and Parts List

Block No. M 2 M M

VC3-1M

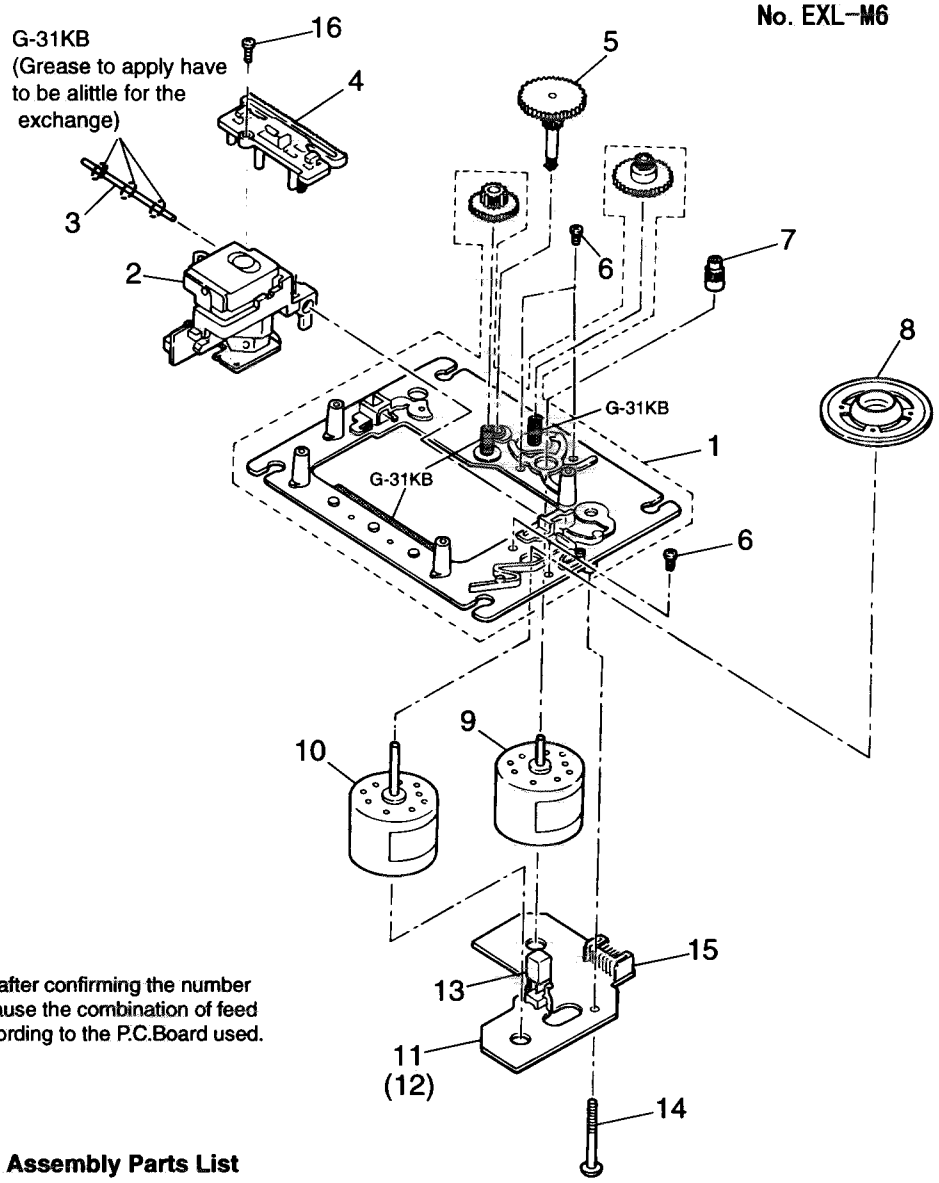


CD Mechanism Ass'y and Parts List

Grease Point

Block No. M3MM

No. EXL-M6



NOTE
Please order moutor after confirming the number of the P.C.Board because the combination of feed motor is different according to the P.C.Board used.

■CD Mechanism Assembly Parts List

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	EPB-002PK	MECHA. BASE ASSY	1		
	2	OPTIMA-150S	OPTICAL PICK UP	1		
	3	E407782-001	CD SHAFT	1		
	4	E307746-001	CD RACK	1		
	5	EPB-003A	MECHA GEAR	1		
	6	SDSP2003N	SCREW	4		
	7	E406750-001	PINION GEAR	1		
	8	EPB309173A	TURN TABLE	1		
	9	E406784-001	FEED MOTOR	1	Use the No.11 P.C.Board	
		MDN-4RA3ETA-1	FEED MOTOR	1	Use the No.12 P.C.Board	
	10	E406783-001	SPINDLE MOTOR	1		
	11	EMW10190-001(S)	P. C. BOARD	1		
	12	EMW10190-221(S)	P. C. BOARD	1		
	13	ESB1100-005	LEAF SWITCH	1		
	14	E75832-001	SCREW	1		
	15	EMV5109-006B	CONN. TERMINAL	1		
	16	SDSF2006Z	SCREW	1		

BLOCK NO. M1MM

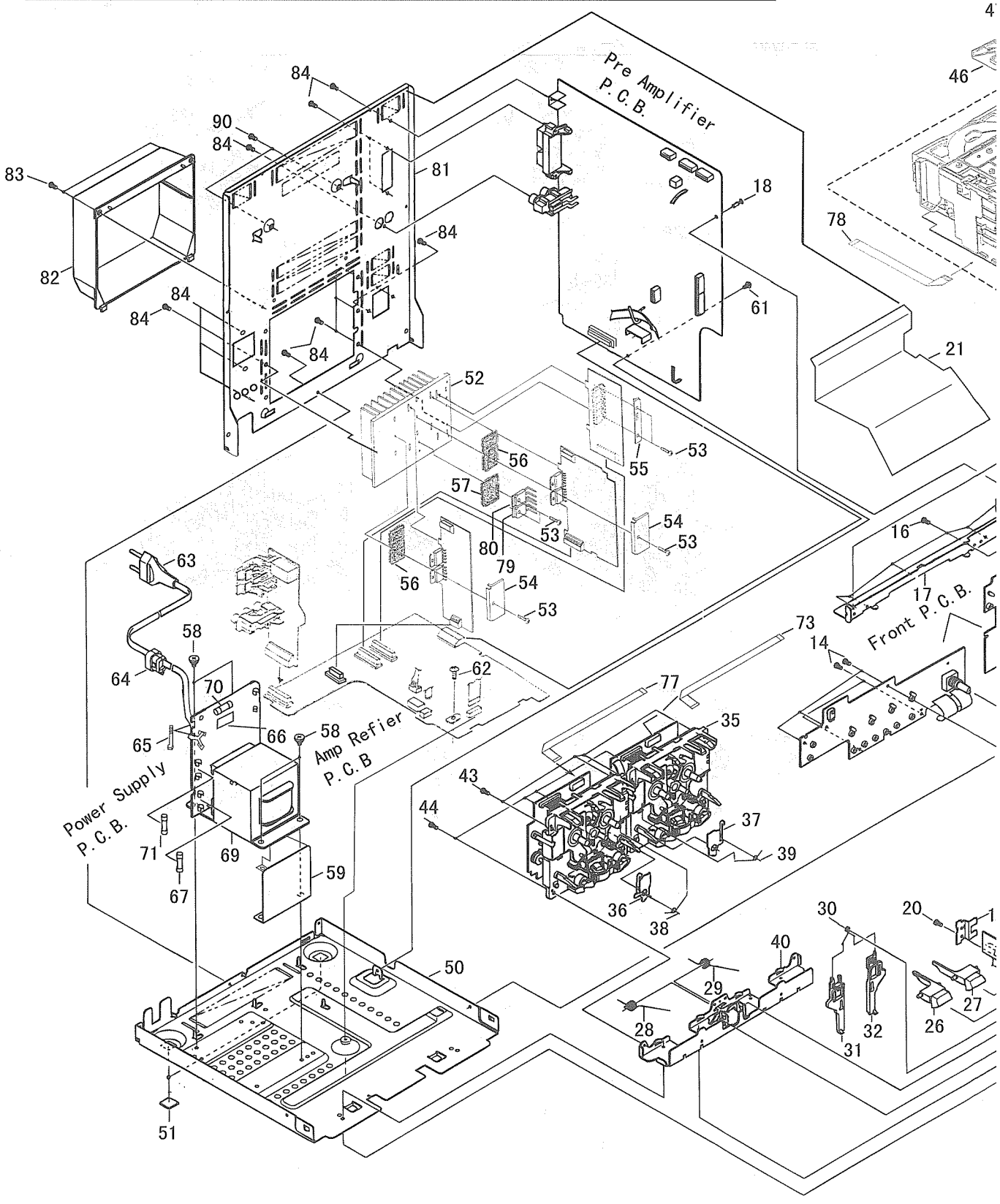
⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	GV10001-004AKP	FRONT PANEL		1		
	2	E75896-001	SPACER		2		
	3	E406971-001SM	JVC MARK		1		
	4	GV40003-001AKP	STBY.INDICATOR		1		
	5	GV20009-002AKP	CD BUTTON		1		
	6	GV30008-002AKP	DISC BUTTON	ATTACH TO CD BT	1		
	7	GV30010-003AKP	POWER BUTTON	ON/STANDBY MARK	1		
	8	GV30016-002AKP	PUSH BUTTON		1		
	9	GV30017-002AKP	PUSH BUTTON		1		
	10	GV20006-001AKP	SOUND BUTTON		1		
	11	GV30018-003BKP	SEARCH BTN.ASSY		1		
	12	GV30009-002AKP	CONTROL BUTTON		1		
	13	GV30013-001AKP	SOURCE BUTTON		1		
	14	SDSF2608Z	SCREW	SWITCH BOARD	5		
	15	SDSF2608Z	SCREW	MICOM BOARD	4		
	16	SDSF2608Z	SCREW	STY.BKT+F.PANEL	6		
	17	GV30003-001AKP	STAY BRACKET		1		
	18	FMYH4004-001	PLASTIC RIVET	MAIN BOARD&BKT.	1		
	19	GV40001-001AKP	H.P BRACKET		1		
	20	SDSF2608Z	SCREW	H.P BKT.+F.PANE	1		
	21	GV30022-001A	PROTECT SHEET		1		
	22	GV20001-004AKP	CASS HOLDER(L)		1		
	23	GV20002-004AKP	CASS HOLDER(R)		1		
	24	GV20003-001AKP	CASS LENS (L)		1		
	25	GV20004-001AKP	CASS LENS (R)		1		
	26	GV30014-005AKP	EJECT BUTTON(A)		1		
	27	GV30015-005AKP	EJECT BUTTON(B)		1		
	28	FMKW4009-001	HOLDER SPRING A		1		
	29	FMKW4010-001	HOLDER SPRING B		1		
	30	FMKW4011-001	SPRING	FOR EJECT LEVER	1		
	31	FMKS3002-002KP	EJECT LEVER(A)		1		
	32	FMKS3003-002KP	EJECT LEVER(B)		1		
	33	VYH7779-00B	DUMPER ASS'Y		2		
	34	VKY4180-001	CASSETTE SPRING		4		
	35	-------	SLC(W)MECHA UNI		1		
	36	FMKL4012-003	EJECT SAFETY(A)		1		
	37	FMKL4013-001	EJECT SAFETY(B)		1		
	38	FMKW4007-001	SPRING (A)	EJECT SAFETY A	1		
	39	FMKW4008-001	SPRING (B)	EJECT SAFETY B	1		
	40	FMKL2002-001	HOLDER BRACKET		1		
	41	SBSG3010Z	T.SCREW	F.P.TO H.BRKT.	2		
	42	SBSG3010Z	T.SCREW	F.P.TO CHS.BASE	2		
	43	SBSG3010Z	T.SCREW	MECHA & H.BRKT.	4		
	44	SBSF3010Z	SCREW	MECHA & F.PANEL	4		
	45	------	VIDEO 3CD CHANG		1		
	46	E309662-001	DISC STOPPER		1		
	47	SBSF3008Z	SCREW	FOR DISC STOPPE	1		
	48	FMKL4008-001	ROD STOPPER		1		
	49	SBSF3008Z	SCREW	FOR LOD STOPPER	1		
	50	GV10003-001AKP	CHASSIS BASE		1		
	51	E75896-006	FELT SPACER	CHAS.BASE FOOT	2		
	52	GV30006-002AKP	HEAT SINK		1		
	53	SBSG3014CC	T.SCREW		6		
	54	FMKL4007-001	BRACKET	FOR POWER IC	2		
	55	E406969-002SM	LEAF SPRING		1		

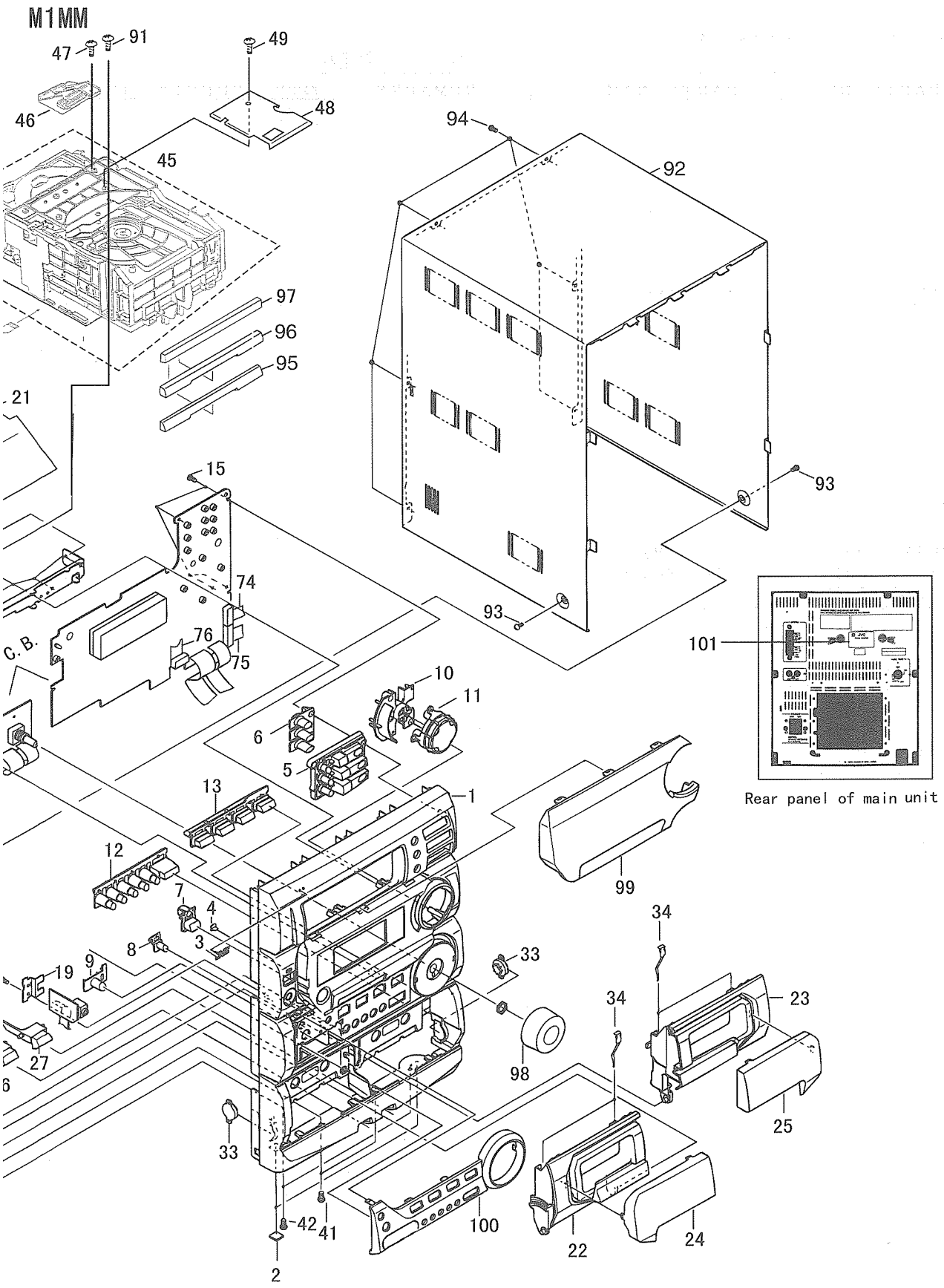
BLOCK NO. M1MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	56	FMPK4003-001	MICA SHEET		2		
	57	FMPK4004-001	MICA SHEET		1		
	58	E65389-002	SPECIAL SCREW		4		
	59	LE30469-001A	SHIELD PLATE		1		
	61	GBSG3008CC	T.SCREW	M.BOARD & C.BAS	1		
	62	GBSG3008CC	T.SCREW	FMH BRD.& C.BAS	1		
	63	QMPD130-200-JN	POWER CORD		1		
	64	QHS3771-108	CORD STOPPER		1		
	65	QHX2075-001	WIRE CLAMP	P.CORD/P.PWB	1		
	66	E61380-010	FUSE LABEL	FL001	1		
	67	QMF51U1-5R0-J1	FUSE	F101	1		
	69	QQT0157-001	POWER TRANS	T001	1		
	70	QMF51U1-4R0-J1	FUSE	F001	1		
	71	QMF51U1-5R0-J1	FUSE	F102	1		
	73	VWF1211-15TTB	CARD WIRE	FMB-SLC	1		
	74	VWF1220-10TTB	CARD WIRE	FMB-MAIN	1		
	75	VWF1216-10TTB	CARD WIRE	FMB-MAIN	1		
	76	VWF1212-25TTB	TAF CARD	FMB-FMH	1		
	77	VWF1210-20TTB	CARD WIRE	MAIN-SLC	1		
	78	VWF1019-20TTA	CARD WIRE	MAIN-VC3	1		
	79	2SC4467/OPY/-F1	TRANSISTOR	Q757	1		
	80	2SA1694/OPY/-F1	TRANSISTOR	Q758	1		
	81	GV10004-022AKP	REAR PANEL		1	C	
		GV10004-013AKP	REAR PANEL		1	J	
	82	E207356-002SM	REAR COVER		1		
	83	SBSG3008Z	T.SCREW	C3 & STAY BRKT.	2		
	84	E73273-003	SPECIAL SCREW	SPK.TEM./R.PANE	2		
		E73273-003	SPECIAL SCREW	H.SINK/ R.PANEL	3		
		E73273-003	SPECIAL SCREW	C3 / REAR PANEL	2		
		E73273-003	SPECIAL SCREW	E.PLATE/R.PANEL	1		
		E73273-003	SPECIAL SCREW	AUX/REAR PANEL	1		
		E73273-003	SPECIAL SCREW	SUR.TEM/R.PANEL	1		
		E73273-003	SPECIAL SCREW	R.PANEL/ C.BASE	1		
	90	E73273-003	SPECIAL SCREW	ANTENA/ R.PANEL	2		
	91	E73273-003	SPECIAL SCREW	R.COVER/R.PANEL	2		
	92	GV10002-008AKP	METAL COVER		1		
	93	SBSB3006M	T.SCREW		2		
	94	E73273-003	SPECIAL SCREW		6		
	95	E209153-004SMKP	CD FITTING	DISC 1	1		
	96	E209155-003SMKP	CD FITTING	DISC 2	1		
	97	E209157-004SMKP	CD FITTING	DISC 3	1		
	98	E310080-231SMKP	M.VOL.KNOB		1		
	99	GV20005-006AKP	WINDOW SCREEN		1		
	100	GV20007-005AKP	ORNAMENT		1		
	101	E307570-001	NUMBER LABEL	FOR J VER.ONLY	1		

General Exploded View and Parts List

Block No. M1





Rear panel of main unit

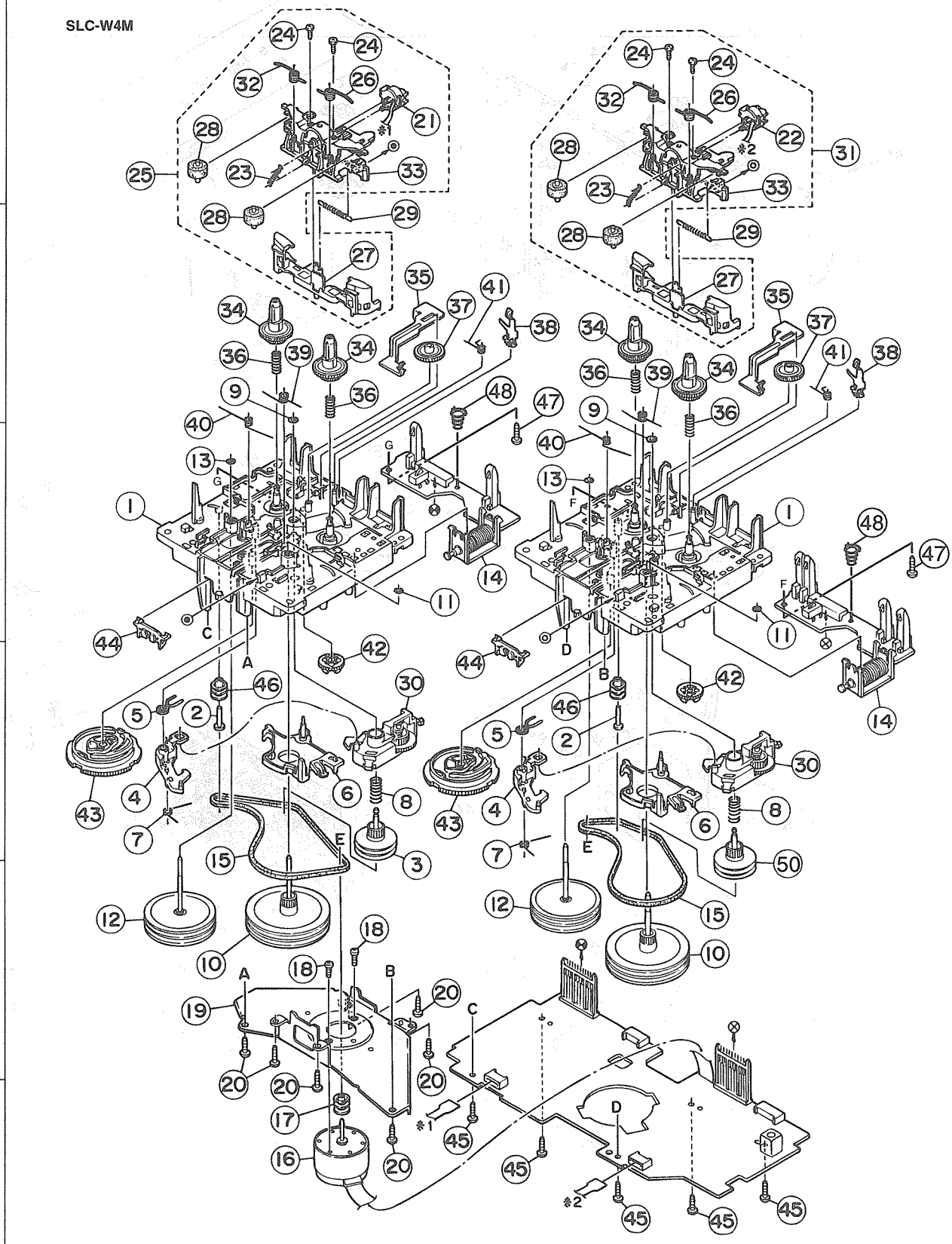
■ Parts List (Cassette Mechanism Ass'y)

BLOCK NO. M4MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	VKS1165-00FKP	CHASSIS B. ASSY		2		
	2	VKH5786-002	SHAFT		2		
	3	VKR3199-002	MAIN PULLEY		2		
	4	VKS3785-001MM	FR ARM		2		
	5	VKW5284-002	SWING SPRING		2		
	6	VKS2278-001	TRIGGER ARM		2		
	7	VKW5301-001	FR SPRING		2		
	8	VKW5266-001	ELEVATOR SPRING		2		
	9	WDL214025	WASHER		2		
	10	VKF3205-00B	F.WHEEL ASSY(R)		2		
	11	WDL183425	SLIT WASHER		2		
	12	VKF3207-00B	F.WHEEL ASSY(L)		2		
	13	WDL173525-6	SLIT WASHER		2		
	14	VGP2401-00A	DC SOLENOID		2		
	15	VKB3000-174	CAPSTAN BELT(B)		2		
	16	MSI-5U2LWA	D.C.MOTOR ASS'Y		1		
	17	VKR4761-001	MOTOR PULLEY		1		
	18	SPSP2604Z	SCREW		2		
	19	VKM3907-001	JOINT BRACKET		1		
	20	SBSF2608Z	T.SCREW		6		
	21	VGH0424-037	ERASE HEAD		1		
	22	VGH0425-544	R/P&E HEAD		1		
	23	VKW5302-001	HEAD SPRING		2		
	24	VKZ4730-001	SPECIAL SCREW		4		
	25	VKS2279-00CKP	HEAD MOUNT ASSY		1		
	26	VKW5299-001	PIN.ROL.SP.(R)		2		
	27	VKS2277-005	DIRECTION LEVER		2		
	28	VKP4233-00A	PINCH ROL. ASSY		4		
	29	VKW5285-001	RETURN SPRING		2		
	30	VKS3786-00EKP	CLUTCH ASSY		2		
	31	VKS2275-00C	HEAD MOUNT ASSY		1		
	32	VKW5300-001	PIN.ROL.SP.(L)		2		
	33	VKS1167-001KP	HEAD MOUNT BASE		2		
	34	VKS2274-002	REEL GEAR		4		
	35	VKM3906-002	PLAY SW.LEVER		2		
	36	VKW5286-002	B.T. SPRING		4		
	37	VKS5559-001	PLAY IDLE GEAR		2		
	38	VKY3149-001	CASSETTE SP.		2		
	39	VKW5279-001	HEAD BASE SP(R)		2		
	40	VKW5280-001	HEAD BASE SP(L)		2		
	41	VKW5296-001	EARTH SPRING		2		
	42	VKS5560-001	FR IDLE GEAR		2		
	43	VKS1166-003KP	CONTROL CAM		2		
	44	VKS5577-001	FPC HOLDER		2		
	45	SBSF2608Z	T.SCREW	FOR P.W.B.	5		
	46	VKR4749-002	IDLE PULLEY		2		
	47	SBSF2006Z	SCREW		2		
	48	LV40450-001AKP	CONNECT SP		2		

Cassette Mechanism & Parts List

Block No. M 4 M M



■Electric Parts List (Power Supply & Amplifier P. C. B.)

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C001	QFV82AJ-104	M.CAPA. I.M	.10MF 5% 100V	
	C002	QFV82AJ-104	M.CAPA. I.M	.10MF 5% 100V	
	C003	QFV82AJ-104	M.CAPA. I.M	.10MF 5% 100V	
	C004	QEZ0360-568	E.CAPA	5600MF	
	C005	EEW5618-688J5	E.CAPA.		
	C011	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C012	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C013	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C014	QETM1VM-338	E CAPACITOR	3300MF 20% 35V	
	C015	QETM1VM-338	E CAPACITOR	3300MF 20% 35V	
	C016	QET41VM-107	E CAPACITOR	100MF 20% 35V	
	C017	QETN1JM-476Z	E CAPACITOR	47MF 20% 63V	
	C018	QET41HM-226	E CAPACITOR	22MF 20% 50V	
	C019	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C020	QET41HM-226	E CAPACITOR	22MF 20% 50V	
	C021	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C022	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C023	QET41HM-474	E CAPACITOR	.47MF 20% 50V	
	C024	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C025	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C030	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C031	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C032	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C033	QFLC1HJ-103ZM	M CAPACITOR	.010MF 5% 50V	
	C045	QET41EM-476	E CAPACITOR	47MF 20% 25V	
	C060	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C061	QCF11HP-103	C CAPACITOR	.010MF +80:-20%	
	C062	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C066	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C067	QCF11HP-103	C CAPACITOR	.010MF +80:-20%	
	C068	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C069	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C070	QCF11HP-103	C CAPACITOR	.010MF +80:-20%	
	C071	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C072	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C073	QCF11HP-103	C CAPACITOR	.010MF +80:-20%	
	C074	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C703	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C704	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C705	QCBB1HK-181Y	C CAPACITOR	180PF 10% 50V	
	C706	QCBB1HK-181Y	C CAPACITOR	180PF 10% 50V	
	C707	QET41EM-476	E CAPACITOR	47MF 20% 25V	
	C708	QET41EM-476	E CAPACITOR	47MF 20% 25V	
	C709	QCS11HJ-100	C CAPACITOR	10PF 5% 50V	
	C710	QCS11HJ-100	C CAPACITOR	10PF 5% 50V	
	C711	QET41HM-226	E CAPACITOR	22MF 20% 50V	
	C712	QET41HM-226	E CAPACITOR	22MF 20% 50V	
	C713	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C714	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C715	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C716	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C717	QFLC1HJ-473ZM	M CAPACITOR	.047MF 5% 50V	J
	C718	QFLC1HJ-473ZM	M CAPACITOR	.047MF 5% 50V	J
	C721	QTE1V06-106Z	E.CAPACITOR		
	C722	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C726	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C729	QET41CM-476	E CAPACITOR	47MF 20% 16V	
	C739	QFLC1HJ-103ZM	M CAPACITOR	.010MF 5% 50V	
	C751	QCY31HK-272Z	C.CAPACITOR	2700PF 10% 50V	
	C752	QCY31HK-272Z	C.CAPACITOR	2700PF 10% 50V	
	C753	QCY31HK-472Z	C.CAPACITOR	4700PF 10% 50V	
	C754	QCY31HK-472Z	C.CAPACITOR	4700PF 10% 50V	
	C755	QFV41HJ-105	TF.CAPACITOR	1.0MF 5% 50V	
	C756	QFV41HJ-105	TF.CAPACITOR	1.0MF 5% 50V	
	C757	QCXB1CM-152Y	C CAPACITOR	1500PF 20% 16V	
	C758	QCXB1CM-152Y	C CAPACITOR	1500PF 20% 16V	
	C781	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C782	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C783	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C784	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C785	QCBB1HK-181Y	C CAPACITOR	180PF 10% 50V	
	C786	QCBB1HK-181Y	C CAPACITOR	180PF 10% 50V	
	C787	QET41EM-476	E CAPACITOR	47MF 20% 25V	
	C788	QET41EM-476	E CAPACITOR	47MF 20% 25V	
	C789	QCS11HJ-100	C CAPACITOR	10PF 5% 50V	
	C790	QCS11HJ-100	C CAPACITOR	10PF 5% 50V	
	C791	QET41HM-226	E CAPACITOR	22MF 20% 50V	
	C792	QET41HM-226	E CAPACITOR	22MF 20% 50V	
	C793	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C794	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C795	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C796	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	C
	C797	QFLC1HJ-473ZM	M CAPACITOR	.047MF 5% 50V	J
	C798	QFLC1HJ-473ZM	M CAPACITOR	.047MF 5% 50V	J
	C799	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
⚠	D001	1N5402M-20	DIODE	HIGH	
⚠	D002	1N5402M-20	DIODE	HIGH	
⚠	D003	1N5402M-20	DIODE	HIGH	
⚠	D004	1N5402M-20	DIODE	HIGH	
⚠	D011	30DF2FC	DIODE	LOW	
⚠	D012	30DF2FC	DIODE	LOW	
⚠	D013	30DF2FC	DIODE	LOW	
⚠	D014	30DF2FC	DIODE	LOW	
	D015	30DF2FC	DIODE	CHANGE	
	D016	30DF2FC	DIODE	CHANGE	
⚠	D017	1SR35-100	SI DIODE		
	D018	1SR35-100	SI DIODE		
	D019	MTZ30JC	ZENER DIODE		
	D020	UZ6.2BSA	Z.DIODE IDM		
	D021	MTZ5.1B	ZENER DIODE		
	D022	1SS133-T2	DIODE		
	D023	1SS133-T2	DIODE		
	D024	1SS133-T2	DIODE		
	D025	1SS133-T2	DIODE		
⚠	D027	1SR35-100	SI DIODE		
	D030	MTZ11JA	Z.DIODE I.M		
	D060	MTZ5.1B	ZENER DIODE		
	D061	MTZ11JC	Z.DIODE I.M		
	D062	MTZ13JC	ZENER DIODE		
	D065	MTZ8.2JC	ZENER DIODE		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	D066	MTZ13JC	ZENER DIODE		
	D067	MTZ13JC	ZENER DIODE		
	D068	MTZ13JC	ZENER DIODE		
	D069	MTZ13JC	ZENER DIODE		
	D070	MTZ13JC	ZENER DIODE	SHORT TEST	
	D703	1SS133-T2	DIODE		
	D704	1SS133-T2	DIODE		
	D719	1SS133-T2	DIODE		
	D720	1SS133-T2	DIODE		
	D728	1SS133-T2	DIODE		
	D751	1SS133-T2	DIODE		
	D752	1SS133-T2	DIODE		
	D753	1SS133-T2	DIODE		
	D754	1SS133-T2	DIODE		
	D755	1SS133-T2	DIODE		
	D756	1SS133-T2	DIODE		
	D757	MTZ3.9JB	Z DIODE		
	D758	MTZ3.9JB	Z DIODE		
	D759	1SS133-T2	DIODE		
	D760	1SS133-T2	DIODE		
	D789	1SS133-T2	DIODE		
	D790	1SS133-T2	DIODE		
	L001	VQZ0048-009	INDUCTOR		
	L701	EQL0011-R45J1	INDUCTOR		
	L702	EQL0011-R45J1	INDUCTOR		
	L781	EQL0011-R45J1	INDUCTOR		
	L782	EQL0011-R45J1	INDUCTOR		
	Q001	2SB1187(F,G)	TRANSISTOR		
	Q003	DTC114YSA-T	D.TR.I.M		
	Q004	DTC114YSA-T	D.TR.I.M		
	Q005	DTC114YS	TR I.M		
	Q030	2SD2061/EF/	TRANSISTOR		
	Q040	2SC945A	TRANSISTOR		
	Q041	2SC945A	TRANSISTOR		
	Q060	2SD2061/EF/	TRANSISTOR		
	Q061	2SC945A	TRANSISTOR		
	Q062	2SC945A	TRANSISTOR		
	Q065	2SD2061/EF/	TRANSISTOR		
	Q066	2SD2061/EF/	TRANSISTOR		
	Q067	2SA933S(RS)	TRANSISTOR		
	Q068	2SC945A	TRANSISTOR		
	Q069	2SD2061/EF/	TRANSISTOR		
	Q070	2SC945A	TRANSISTOR		
	Q071	2SB1187(F,G)	TRANSISTOR		
	Q072	2SA933S(RS)	TRANSISTOR		
	Q073	KRA104M-T	D.TRANSISTOR		
	Q074	DTC144ESA-T	D.TRANSISTOR		
	Q075	KRC104M-T	D.TRANSISTOR		
	Q076	DTA144ES	D.TRANSISTOR		
	Q701	2SA1038(R,S)	TRANSISTOR		
	Q702	2SA1038(R,S)	TRANSISTOR		
	Q726	2SC2389S/SE/-T	TRANSISTOR		
	Q727	2SA1038(R,S)	TRANSISTOR		
	Q728	2SC1740S/RS/-T	TRANSISTOR		
	Q733	2SD2144S(VW)	TRANSISTOR		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q734	2SD2144S(VW)	TRANSISTOR		
	Q735	2SD2144S(VW)	TRANSISTOR		
	Q736	2SD2144S(VW)	TRANSISTOR		
	Q737	KRA111M-T	D.TRANSISTOR		
	Q751	2SC1685	TRANSISTOR		
	Q752	2SA933S(RS)	TRANSISTOR		
	Q753	2SC1685	TRANSISTOR		
	Q754	2SA933S(RS)	TRANSISTOR		
	Q755	2SA965(Y)	TRANSISTOR		
	Q756	2SC2235(O,Y)	TRANSISTOR		
	Q781	2SA1038(R,S)	TR.I.M		
	Q782	2SA1038(R,S)	TR.I.M		
	R001	QRZ9044-335	COMP.RESISTOR	3.3M 1/0W	
⚠	R002	QRD14CJ-4R7SX	C RESISTOR	4.7 5% 1/4W	J
	R003	QRD167J-332	C RESISTOR	3.3K 5% 1/4W	
	R004	QRD161J-223	C RESISTOR	22K 5% 1/4W	
⚠	R005	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R006	QRD14CJ-2R2SX	C RESISTOR	2.2 5% 1/4W	
	R008	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R009	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R010	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R011	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R012	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R013	QRD161J-103	C RESISTOR	10K 5% 1/4W	
⚠	R030	QRD14CJ-4R7SX	C RESISTOR	4.7 5% 1/4W	
	R031	QRD161J-681	C RESISTOR	680 5% 1/4W	
	R040	QRD12CJ-471SX	C RESISTOR	470 5% 1/2W	
	R041	QRD12CJ-331SX	C RESISTOR	330 5% 1/2W	
	R042	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R043	QRD12CJ-471SX	C RESISTOR	470 5% 1/2W	
	R044	QRD12CJ-471SX	C RESISTOR	470 5% 1/2W	
	R045	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R046	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R047	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
⚠	R060	QRG026J-220	OMF RESISTOR	22 5% 1/1W	
⚠	R061	QRG026J-220	OMF RESISTOR	22 5% 1/1W	
	R062	QRD161J-331	C RESISTOR	330 5% 1/4W	
	R063	QRD161J-331	C RESISTOR	330 5% 1/4W	
	R064	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R065	QRD161J-561	C RESISTOR	560 5% 1/4W	
	R066	QRD161J-561	C RESISTOR	560 5% 1/4W	
	R067	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R068	QRD161J-331	C RESISTOR	330 5% 1/4W	
	R071	QRD167J-4R7	C RESISTOR	4.7 5% 1/4W	
	R072	QRD167J-4R7	C RESISTOR	4.7 5% 1/4W	
⚠	R074	QRG022J-220AM	UNF.OMF.RES.	22 5% 1/2W	
⚠	R075	QRG022J-220AM	UNF.OMF.RES.	22 5% 1/2W	
	R076	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R077	QRD161J-681	C RESISTOR	680 5% 1/4W	
	R078	QRD161J-182	C RESISTOR	1.8K 5% 1/4W	
⚠	R079	QRG022J-220AM	UNF.OMF.RES.	22 5% 1/2W	
⚠	R080	QRG022J-220AM	UNF.OMF.RES.	22 5% 1/2W	
	R081	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R082	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
⚠	R083	QRG01DJ-150X	OMF RESISTOR	15 5% 1/1W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R084	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R085	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R086	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R087	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R090	QRD161J-102	C RESISTOR	FMB REQUEST	
	R091	QRD161J-102	C RESISTOR	FMB REQUEST	
	R092	QRD161J-102	C RESISTOR	FMB REQUEST	
	R093	QRD161J-102	C RESISTOR	FMB REQUEST	
	R094	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R701	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R702	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R703	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R704	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R705	QRD14CJ-182SX	UNF.C.RESISTOR	1.8K 5% 1/4W	
	R706	QRD14CJ-182SX	UNF.C.RESISTOR	1.8K 5% 1/4W	
	R707	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R708	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R709	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R710	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R711	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R712	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R713	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R714	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R715	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R716	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R717	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R718	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R719	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R720	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R721	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R722	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R723	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R724	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R725	QRD161J-823	C RESISTOR	82K 5% 1/4W	
	R726	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R727	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R728	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R729	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R730	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R731	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R732	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R733	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R734	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R735	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R736	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R739	QRG01DJ-821X	OMF RESISTOR	820 5% 1/1W	
	R740	QRG01DJ-821X	OMF RESISTOR	820 5% 1/1W	
	R741	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R742	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R743	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R744	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R745	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R746	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R747	QRD161J-823	C RESISTOR	PROTECT	
	R748	QRD161J-104	C RESISTOR	PROTECT	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R749	QRD161J-471	C RESISTOR	470 5% 1/4W	
	R750	QRD161J-471	C RESISTOR	470 5% 1/4W	
	R751	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R752	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R753	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R754	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R755	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R756	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R757	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R758	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R759	QRD167J-682	C RESISTOR	6.8K 5% 1/4W	
	R760	QRD167J-682	C RESISTOR	6.8K 5% 1/4W	
	R761	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R762	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R763	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R764	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R765	QRG01DJ-182X	OMF RESISTOR	1.8K 5% 1/1W	
	R766	QRG01DJ-182X	OMF RESISTOR	1.8K 5% 1/1W	
	R767	QRD14CJ-681SX	UNF C RES I M	680 5% 1/4W	
	R768	QRD14CJ-681SX	UNF C RES I M	680 5% 1/4W	
	R769	QRD14CJ-821SX	C RESISTOR	820 5% 1/4W	
	R770	QRD14CJ-821SX	C RESISTOR	820 5% 1/4W	
	R771	QRD161J-821	C RESISTOR	820 5% 1/4W	
	R772	QRD161J-821	C RESISTOR	820 5% 1/4W	
	R773	QRD14CJ-101SX	UF RESISTOR	100 5% 1/4W	
	R774	QRD14CJ-101SX	UF RESISTOR	100 5% 1/4W	
	R775	QRD161J-471	C RESISTOR	470 5% 1/4W	
	R776	QRD161J-471	C RESISTOR	470 5% 1/4W	
	R777	QRD14CJ-4R7SX	C RESISTOR	4.7 5% 1/4W	
	R778	QRD14CJ-4R7SX	C RESISTOR	4.7 5% 1/4W	
	R779	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R780	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R781	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R782	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R783	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R784	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R785	QRD14CJ-182SX	UNF.C.RESISTOR	1.8K 5% 1/4W	
	R786	QRD14CJ-182SX	UNF.C.RESISTOR	1.8K 5% 1/4W	
	R787	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R788	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R789	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R790	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R791	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R792	QRX014J-R22	UNF.MF.RESISTOR	5% 1/1W	
	R793	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R794	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R795	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R796	QRD14CJ-100SX	UNF.C.RESISTOR	10 5% 1/4W	
	R797	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R798	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	CN002	EMV7163-011	CONNECTOR	TO FMH-014-3 RE	
	CN003	EMV7163-011	CONNECTOR	TO FMH-014-4 FR	
	CN004	EMV7163-005	CONNECTOR	TO FMH-014-5 R/	
	CN005	EMV7163-011	CONNECTOR	TO SPK BOARD	
	CN006	EMV5163-010R	CONNECTOR	TO FMC (MAIN)	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN007	QGF1201C3-12	VMC0332-012	TO FMB (MICOM)	
	CN009	SV40-05WS	CONNECTOR	TO TRANS	
	CN012	EMV5163-011R	CONECTOR	TO FMH-014-2	
	CN013	EMV5163-011R	CONECTOR	TO FMH-014-2	
	CN014	EMV5163-005R	CONNECTOR	TO FMH-014-2	
	CN019	EWS285-202V	SKT WIRE		
	CN111	EMV7145-004Z	SOCKET I.M	TO TRANS	
	CN703	EMV5163-007R	CONNECTOR	TO CONN. BOARD	
	CN704	EMV5163-006R	CONNECTOR	TO CONN. BOARD	
	CN915	EMV7145-004Z	SOCKET I.M	FOR H/PHONE FW	
	EP001	EMZ4002-002Z	IM EARTH PLATE	TO GND CHASSIS	
	FT011	EMG7331-003Z	FUSE CLIP	F001 LIVE FUSE	
	FT012	EMG7331-003Z	FUSE CLIP	F001 LIVE FUSE	
	FT511	EMG7331-003Z	FUSE CLIP	F101 SEC FUSE	
	FT512	EMG7331-003Z	FUSE CLIP	F101 SEC FUSE	
	FT521	EMG7331-003Z	FUSE CLIP	F102 SEC FUSE	
	FT522	EMG7331-003Z	FUSE CLIP	F102 SEC FUSE	
	FW101	EWR34D-14LSV	EF WIRE		
	IC701	TDA7294	I.C.		
	IC702	TDA7294	I.C.		
	IC781	TDA7295	IC		
	IC782	TDA7295	IC		
	TB001	EMZ4001-002Z	TAB I.M		
	TB002	EMZ4001-002Z	TAB I.M		
⚠	TH002	QAD0095-4R7Z	POSISTOR I.M		C

■Electric Parts List (Preamp & Tiner P. C. B.)

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 1	QCC11EM-223V	C CAPACITOR	.022MF 20% 25V	
	C 2	QCXB1CM-332Y	C CAPACITOR	3300PF 20% 16V	
	C 3	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
	C 4	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 5	QET41CM-476	E CAPACITOR	47MF 20% 16V	
	C 7	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C 12	QCS11HJ-150	C CAPACITOR	15PF 5% 50V	
	C 13	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 18	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C 19	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C 21	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
	C 30	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
	C 32	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C 33	QEK61AM-107ZM	E CAPACITOR	100MF 20% 10V	
	C 34	QCS11HJ-150	C CAPACITOR	15PF 5% 50V	
	C 35	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 36	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 37	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 38	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
	C 39	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
	C 40	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 41	QEK41HM-104	E CAPACITOR	.10MF 20% 50V	
	C 42	QEK41HM-474	E CAPACITOR	.47MF 20% 50V	
	C 44	QCS11HJ-680	C CAPACITOR	68PF 5% 50V	
	C 45	QEK61HM-335ZN	E CAPACITOR	3.3MF 20% 50V	
	C 46	QCC11EM-223V	C CAPACITOR	.022MF 20% 25V	
	C 47	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 49	QFLC1HJ-393ZM	M CAPACITOR	.039MF 5% 50V	
	C 50	QFLC1HJ-223ZM	M CAPACITOR	.022MF 5% 50V	
	C 51	QEK41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 52	QEK41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 60	QEK61AM-107ZM	E CAPACITOR	100MF 20% 10V	
	C 61	QCS11HJ-120	C CAPACITOR	12PF 5% 50V	
	C 62	QCS11HJ-120	C CAPACITOR	12PF 5% 50V	
	C 63	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
	C 65	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C 66	QCBB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C 67	QCBB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C 68	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 69	QFV41HJ-105	TF.CAPA. I.M XX	1.0MF 5% 50V	
	C 70	QCXB1CM-392Y	C CAPACITOR	3900PF 20% 16V	
	C 71	QET41CM-476	E CAPACITOR	47MF 20% 16V	
	C 72	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	CF 1	VCF2L3B-108Z	C FILTER		
	CF 2	VCF2L3B-108Z	C FILTER		
	CF 3	VCF1Z2Z-115Z	C FILTER		
	CF 4	CMU2-456A05	CERA LOCK		
	C360	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C361	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C365	QET41CM-227	E CAPACITOR	220MF 20% 16V	
	C366	QET41AM-108	E CAPACITOR	1000MF 20% 10V	
	C372	EETB1HM-475E	E.CAPA. I.M		
	C373	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C380	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C381	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C382	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C383	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C383	QETC1EM-476ZM	E CAPACITOR	47MF 20% 25V	
	C385	EETB1HM-105E	E.CAPA. I.M		
	C386	QCBB1HK-681Y	C CAPACITOR	680PF 10% 50V	
	C387	QFLC1HJ-153ZM	M CAPACITOR	.015MF 5% 50V	
	C388	QCXB1CM-182Y	C CAPACITOR	1800PF 20% 16V	
	C389	QCS11HJ-330	C CAPACITOR	33PF 5% 50V	
	C390	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C398	QFV71HJ-103	TF CAPACITOR	.010MF 5% 50V	
	C399	QFV71HJ-103	TF CAPACITOR	.010MF 5% 50V	
	C401	QFLM1HJ-472Z	M CAPACITOR	4700PF 5% 50V	
	C402	QFLM1HJ-222Z	M CAPACITOR	2200PF 5% 50V	
	C403	QFLM1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C404	QFLM1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C407	EETB1EM-106E	E.CAPA. I.M		
	C408	QTE1V06-106Z	E.CAPA. I.M		
	C411	EETB1EM-106E	E.CAPA. I.M		
	C412	EETB1EM-106E	E.CAPA. I.M		
	C413	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C414	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C415	EETB1EM-106E	E.CAPA. I.M		
	C416	EETB1EM-106E	E.CAPA. I.M		
	C417	EETB1EM-106E	E.CAPA. I.M		
	C418	QETC1HM-225ZM	E.CAPA. I.M	2.2MF 20% 50V	
	C419	EETB1EM-106E	E.CAPA. I.M		
	C420	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C421	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C422	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C423	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C424	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C425	QFLC1HJ-183ZM	M CAPACITOR	.018MF 5% 50V	
	C426	QFLC1HJ-183ZM	M CAPACITOR	.018MF 5% 50V	
	C427	QFLC1HJ-223ZM	M CAPACITOR	.022MF 5% 50V	
	C428	QFLC1HJ-223ZM	M CAPACITOR	.022MF 5% 50V	
	C429	QFLM1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C430	QFLM1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C431	QETC1HM-225ZM	E.CAPA. I.M	2.2MF 20% 50V	
	C432	QETC1HM-225ZM	E.CAPA. I.M	2.2MF 20% 50V	
	C433	EETB1HM-105E	E.CAPA. I.M		
	C434	EETB1HM-105E	E.CAPA. I.M		
	C435	EETB1EM-106E	E.CAPA. I.M		
	C436	EETB1EM-106E	E.CAPA. I.M		
	C441	EETB1EM-106E	E.CAPA. I.M		
	C442	EETB1EM-106E	E.CAPA. I.M		
	C445	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C446	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C447	EETB1EM-106E	E.CAPA. I.M		
	C448	EETB1EM-106E	E.CAPA. I.M		
	C454	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C457	EETB1EM-106E	E.CAPA. I.M		
	C458	EETB1EM-106E	E.CAPA. I.M		
	C459	QFLM1HJ-333Z	M CAPACITOR	.033MF 5% 50V	
	C460	EETB1HM-475E	E.CAPA. I.M		
	C461	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C462	QFLC1HJ-393ZM	M CAPACITOR	.039MF 5% 50V	
	C463	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	
	C465	QFLC1HJ-393ZM	M CAPACITOR	.039MF 5% 50V	
	C466	QFLC1HJ-473ZM	M CAPACITOR	.047MF 5% 50V	
	C467	EETB1HM-105E	E.CAPA. I.M		
	C468	QETC1EM-476ZM	E.CAPA. I.M	47MF 20% 25V	
	C469	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C470	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C471	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C472	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C473	QETC1EM-476ZM	E.CAPA. I.M	47MF 20% 25V	
	C474	QETC1EM-476ZM	E.CAPA. I.M	47MF 20% 25V	
	C475	EETB1EM-106E	E.CAPA. I.M		
	C476	QTE1V06-106Z	E.CAPA. I.M		
	C477	EETB1HM-475E	E.CAPA. I.M		
	C484	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C489	QET41CM-476	E CAPACITOR	47MF 20% 16V	
	C490	QET41CM-476	E CAPACITOR	47MF 20% 16V	
	C493	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C494	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C495	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C496	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C501	EETB1EM-106E	E.CAPA. I.M		
	C502	EETB1EM-106E	E.CAPA. I.M		
	C503	QFLC1HJ-223ZM	M CAPACITOR	.022MF 5% 50V	
	C504	QFLC1HJ-473ZM	M CAPACITOR	.047MF 5% 50V	
	C505	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C506	EETB1EM-106E	E.CAPA. I.M		
	C507	EETB1EM-106E	E.CAPA. I.M		
	C508	EETB1EM-106E	E.CAPA. I.M		
	C509	EETB1EM-106E	E.CAPA. I.M		
	C510	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C511	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C512	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C513	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C514	QFV41HJ-1042M	TF CAPACITOR	.10MF 5% 50V	
	C515	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	
	C516	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	
	C517	EETB1HM-475E	E.CAPA. I.M		
	C518	EETB1HM-475E	E.CAPA. I.M		
	C519	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	
	C520	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	
	C521	EETB1HM-475E	E.CAPA. I.M		
	C522	EETB1HM-475E	E.CAPA. I.M		
	C523	QFV81HJ-154	TF CAPACITOR	.15MF 5% 50V	
	C524	QFV81HJ-154	TF CAPACITOR	.15MF 5% 50V	
	C525	QETN1HM-335Z	E CAPACITOR	3.3MF 20% 50V	
	C526	QETN1HM-335Z	E CAPACITOR	3.3MF 20% 50V	
	C527	QFV81HJ-154	TF CAPACITOR	.15MF 5% 50V	
	C528	QFV81HJ-154	TF CAPACITOR	.15MF 5% 50V	
	C529	QFV41HJ-474	CAPACITOR	.47MF 5% 50V	
	C530	QETC1EM-476ZM	E.CAPA. I.M	47MF 20% 25V	
	C531	QET41CM-227	E CAPACITOR	220MF 20% 16V	
	C532	QCBB1HK-681Y	C CAPACITOR	680PF 10% 50V	
	C533	QCSB1HJ-470Y		47PF 10% 50V	

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C535	QCBB1HK-561Y	C CAPACITOR	560PF 10% 50V	
	C541	QETC1HM-225ZM	E.CAPA. I.M	2.2MF 20% 50V	
	C543	QCF11HP-473	C CAPACITOR	.047MF +80:-20%	
	C544	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	
	C545	QETB1HM-474N	E.CAPA. I.M	.47MF 20% 50V	
	C546	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C547	QCY41HK-332	C CAPACITOR	3300PF 10% 50V	
	C548	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C549	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C550	QCF11HP-473	C CAPACITOR	.047MF +80:-20%	
	C551	QCS11HJ-300	C CAPACITOR	X.TAL	
	C552	QCS11HJ-300	C CAPACITOR	X.TAL	
	C553	EETB1EM-106E	E.CAPA. I.M	SIGNAL OUT	
	C554	EETB1EM-106E	E.CAPA. I.M	SIGNAL OUT	
	C555	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C556	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C561	QETC1HM-225ZM	E.CAPA. I.M	CENTER/REAR IN	
	C562	QETC1HM-225ZM	E.CAPA. I.M	CENTER/REAR IN	
	C563	EETB1HM-105E	E.CAPA. I.M	CENTER/REAR OUT	
	C564	EETB1HM-105E	E.CAPA. I.M	CENTER/REAR OUT	
	C565	EETB1EM-106E	E.CAPA. I.M		
	C567	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C568	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C569	EETB1EM-106E	E.CAPA. I.M		
	C570	EETB1EM-106E	E.CAPA. I.M		
	C581	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C582	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C584	QFV71HJ-103	TF CAPACITOR	.010MF 5% 50V	
	D 1	1SS133-T2	DIODE		
	D 2	1SS133-T2	DIODE		
	D 3	1SS133-T2	DIODE		
	D 4	1SS133-T2	DIODE		
	D301	1SR35-100	SI DIODE		
	D302	MTZ3.9JB	Z DIODE		
	D303	1SS133-T2	DIODE		
	D304	1SR35-100	SI DIODE		
	D305	1SS133-T2	DIODE		
	D306	1SS133-T2	DIODE		
	D307	1SS133-T2	DIODE		
	D401	MTZ5.1B	ZENER DIODE		
	D402	MTZ5.1B	ZENER DIODE		
	D403	1SR35-100	SI DIODE		
	D481	1SS133-T2	DIODE		
	D482	1SS133-T2	DIODE		
	IC 1	TA2057N	IC		
	IC 2	LC72136N	IC		
	J 1	FMMB10YV-401K	ANT TERMINAL		
	J401	EMN00TV-222AJ2	PIN JACK		
	L 1	VQZ0098-202	COIL BLOCK		
	L 4	VQP0018-221	INDUCTOR		
	L 10	VQZ0069-002S	TRAP COIL		
	L401	QQL29BJ-100Z	INDUCTOR		
	L402	VQZ0048-009	INDUCTOR		
	L403	VQZ0048-009	INDUCTOR		
	Q 1	2SC1923	TR TAPE		

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q 6	DTA114YS	D.TR.I.M		
	Q301	2SD2144S(VW)	TRANSISTOR		
	Q302	2SD2144S(VW)	TRANSISTOR		
	Q304	2SA1175	TRANSISTOR		
	Q305	2SC2785	TRANSISTOR		
	Q306	2SC2785	TRANSISTOR		
	Q307	2SC2785	TRANSISTOR		
	Q308	DTC144TSA-T	D.TR.I.M		
	Q401	2SD2144S(VW)	TRANSISTOR		
	Q402	2SD2144S(VW)	TRANSISTOR		
	Q403	KRA102M-T	D.TR.I.M		
	Q404	DTC114YSA-T	D.TR.I.M		
	Q501	2SD2144S(VW)	TRANSISTOR		
	Q502	2SD2144S(VW)	TRANSISTOR		
	R 1	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 2	QRD161J-181	C RESISTOR	180 5% 1/4W	
	R 10	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 12	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 13	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R 20	QRD161J-331	C RESISTOR	330 5% 1/4W	
	R 21	QRD161J-224	C RESISTOR	220K 5% 1/4W	
	R 22	QRD161J-331	C RESISTOR	330 5% 1/4W	
	R 23	QRD161J-270	C RESISTOR	27 5% 1/4W	
	R 24	QRD161J-271	C RESISTOR	270 5% 1/4W	
	R 25	QRD161J-273	C RESISTOR	27K 5% 1/4W	
	R 27	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R 29	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R 30	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R 31	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R 32	QRD161J-273	C RESISTOR	27K 5% 1/4W	
	R 33	QRD161J-560	C RESISTOR	56 5% 1/4W	
	R 34	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R 35	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R 36	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R 37	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R 38	QRD161J-392	C RESISTOR	3.9K 5% 1/4W	
	R 39	QRD161J-392	C RESISTOR	3.9K 5% 1/4W	
	R 42	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 43	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 44	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 45	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 46	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R 47	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R 48	QRD161J-331	C RESISTOR	330 5% 1/4W	
	R 49	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 52	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R 54	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R 55	QRD161J-182	C RESISTOR	1.8K 5% 1/4W	
	R 56	QRD167J-332	C RESISTOR	3.3K 5% 1/4W	
	R 57	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R 64	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R 65	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R 66	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R 69	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R100	QRD161J-103	C RESISTOR	10K 5% 1/4W	

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R101	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R102	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R103	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R104	QRD161J-512	C RESISTOR	5.1K 5% 1/4W	
	R105	QRD161J-1R0	C RESISTOR	1.0 5% 1/4W	
	R360	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R362	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R370	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R371	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R372	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R373	QRD161J-390	C RESISTOR	39 5% 1/4W	
	R375	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R376	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R377	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R378	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R383	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R384	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R386	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R387	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R388	QRD161J-220	C RESISTOR	22 5% 1/4W	
	R389	QRD161J-225	C RESISTOR	2.2M 5% 1/4W	
	R401	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R402	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R403	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R404	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R405	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R406	QRD161J-152	C RESISTOR	1.5K 5% 1/4W	
	R407	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R408	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R413	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R414	QRD161J-123	C RESISTOR	12K 5% 1/4W	
	R415	QRD161J-823	C RESISTOR	82K 5% 1/4W	
	R416	QRD161J-823	C RESISTOR	82K 5% 1/4W	
	R417	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R418	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R419	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R420	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R421	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R422	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R429	QRD161J-152	C RESISTOR	1.5K 5% 1/4W	
	R430	QRD161J-152	C RESISTOR	1.5K 5% 1/4W	
	R433	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R434	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R435	QRD161J-822	C RESISTOR	8.2K 5% 1/4W	
	R436	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R437	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R438	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R439	QRD161J-432	C RESISTOR	4.3K 5% 1/4W	
	R440	QRD161J-432	C RESISTOR	4.3K 5% 1/4W	
	R441	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R442	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R445	QRD161J-303Y	C RESISTOR	30K 5% 1/4W	
	R446	QRD161J-303Y	C RESISTOR	30K 5% 1/4W	
	R447	QRD161J-153	C RESISTOR	15K 5% 1/4W	
	R450	QRD161J-224	C RESISTOR	220K 5% 1/4W	

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R453	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R454	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R455	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R456	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R457	QRD161J-752	C RESISTOR	7.5K 5% 1/4W	
	R458	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R459	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R460	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R461	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R462	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R463	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R464	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R465	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R469	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R470	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R471	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R472	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R473	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R493	QRD161J-203	C RESISTOR	20K 5% 1/4W	
	R494	QRD161J-203	C RESISTOR	20K 5% 1/4W	
	R497	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R498	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R501	QRD161J-102	C RESISTOR	SIGNAL IN	
	R502	QRD161J-102	C RESISTOR	SIGNAL IN	
	R541	QRD161J-105	C RESISTOR	1.0M 5% 1/4W	
	R542	QRD161J-393	C RESISTOR	39K 5% 1/4W	
	R543	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R544	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R545	QRD161J-203	C RESISTOR	20K 5% 1/4W	
	R546	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R547	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R548	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R549	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R553	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R554	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R555	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R556	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R561	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R562	QRD161J-473	C RESISTOR	47K 5% 1/4W	
	R563	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R564	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R565	QRD161J-132	C.RES. I.M	1.3K 5% 1/4W	
	R566	QRD161J-162	C RESISTOR	1.6K 5% 1/4W	
	R567	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R568	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R569	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R570	QRD161J-221	C RESISTOR	220 5% 1/4W	
	R571	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R572	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R573	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R574	QRD161J-103	C RESISTOR	SIGNAL IN	
	R575	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R576	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R577	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R578	QRD161J-103	C RESISTOR	10K 5% 1/4W	

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R579	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R580	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R581	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R582	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R583	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R584	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R585	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R586	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R587	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R588	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R589	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R590	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R591	QRD161J-223	C RESISTOR	22K 5% 1/4W	
	R593	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R594	QRD161J-101	C RESISTOR	100 5% 1/4W	
	R595	QRD161J-181	C RESISTOR	180 5% 1/4W	
	R597	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R599	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	T 1	VQT7A21-113	IFT		
	TU 1	QAU0037-001	FRONT END		
	X 1	QAX0402-001	CRYSTAL		
	X541	ECXP8R0-001Z	RESONATOR I.M	X.TAL	
	CN410	EMV7171-119	CONNECTOR	MAIN-VC3	
	CN411	QGF1201C3-20	FFC/FPC CONNE	FMB-MAIN	
	CN412	VMC0332-010V	CONNECTOR	MAIN-SLC	
	CN413	VMC0332-016V	FFC/FPC CONNE	FMB-MAIN	
	CN415	EMV7145-004Z	SOCKET I.M	MAIN-C.BRD	
	CN416	QGB2510J1-10	CONNECTOR	FMH-FMC	
	CN430	EMV7145-003Z	SOCKET I.M		
	EP001	E409182-001SM	GRAND TERMINAL		
	IC401	TDA7439	IC	MAIN VOL	
	IC402	BA15218	IC		
	IC403	BA15218	IC	KARAOKE	
	IC404	TC4052BP	IC		
	IC405	BA15218	IC		
	IC406	LA2650	IC		
	IC407	BA15218	IC		
	IC501	LA2786	IC		
	IC541	LV1016	IC		
	IC542	BA3835S	IC		
	IC561	TDA7439	IC		
	IC562	BA15218	IC		

■Electric Parts List (System Micom & Operation Switch P. C. B.)

BLOCK NO. 03

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	A801	QRB169J-104	R.NETWORK	100K 5% 1/6W	
	A802	QRB169J-104	R.NETWORK	100K 5% 1/6W	
	C801	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C802	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C803	QCS11HJ-220	C CAPACITOR	22PF 5% 50V	
	C804	QCS11HJ-220	C CAPACITOR	22PF 5% 50V	
	C805	QCS31HJ-390Z	C CAPACITOR	39PF 5% 50V	
	C806	QCS31HJ-390Z	C CAPACITOR	39PF 5% 50V	
	C807	QCS11HJ-220	C CAPACITOR	22PF 5% 50V	
	C808	QCS11HJ-220	C CAPACITOR	22PF 5% 50V	
	C809	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C810	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C811	QER41AM-227N	E.CAPACITOR	220MF 20% 10V	
	C812	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C814	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C815	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C816	QFV71HJ-124ZM	TF CAPACITOR	.12MF 5% 50V	
	C821	QETN1HM-226Z	E CAPACITOR	22MF 20% 10V	
	C822	QET41HM-226	E CAPACITOR	22MF 20% 50V	
	C840	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C841	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C843	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C844	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C845	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C900	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C901	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C902	QCGB1HK-102	C CAPACITOR	1000PF 10% 50V	
	C903	QER50JM-476	E.CAPACITOR	47MF 20% 6.3V	
	D801	1SS133-T2	DIODE		
	D802	1SS119-02	SI DIODE		
	D803	1SS119-02	SI DIODE		
	D804	1SS119-02	SI DIODE		
	D805	1SS133-T2	DIODE		
	D806	SLR-342VC-T	LED I.M		
	D807	SLR-342MCA47	LED I.M		
	D808	SLR-342MCA47	LED I.M		
	D809	SLR-342MCA47	LED I.M		
	D810	SLR-342MCA47	LED I.M		
	D811	SLR-342MCA47	LED I.M		
	D812	SLR-342MCA47	LED I.M		
	D813	SLR-342MCA47	LED I.M		
	D820	1SS133-T2	DIODE		
	D910	SLR-342MCA47	LED I.M		
	D911	SLR-342MCA47	LED I.M		
	D912	SLR-342MCA47	LED I.M		
	D913	SLR-342MCA47	LED I.M		
	D914	SLR-342MCA47	LED I.M		
	D915	SLR-342MCA47	LED I.M		
	D916	SLR-342MCA47	LED I.M		
	D917	SLR-342MCA47	LED I.M		
	D918	SLR-342VC-T	LED I.M		
	D919	1SS133-T2	DIODE		
	J 81	EMB10TV-401AJ3	SPK.TERMINAL		
	J 83	QNN0197-001	PIN JACK		
	J850	QNS0032-001	JACK	HEAD PHONE	

BLOCK NO. 03

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	L801	QQL29BJ-100Z	INDUCTOR		
	L802	VQP0026-470Z	INDUCTOR		
	L803	VQP0018-220	INDUCTOR		
	L804	VQP0026-470Z	INDUCTOR		
	L805	VQP0026-470Z	INDUCTOR		
	L807	VQZ0048-009	INDUCTOR		
	L840	EQL4007-2R2T	INDUCTOR		
	Q801	2SC2668(O)	TRANSISTOR		
	Q802	2SC2668(O)	TRANSISTOR		
	Q803	DTA114ES	D.TRANSISTOR		
	Q804	DTC114ESA-T	D.TRANSISTOR		
	Q805	DTC114ESA-T	D.TRANSISTOR		
	Q806	DTC114ESA-T	D.TRANSISTOR		
	Q807	DTC114ESA-T	D.TRANSISTOR		
	Q808	DTC114ESA-T	D.TRANSISTOR		
	Q809	2SC2785	TRANSISTOR		
	Q910	DTC114ESA-T	D.TRANSISTOR		
	Q912	DTC114ESA-T	D.TRANSISTOR		
	Q914	DTC114ESA-T	D.TRANSISTOR		
	Q916	DTC114ESA-T	D.TRANSISTOR		
	RY 1	ESK7D24-212J4	RELAY		
	RY 2	ESK7D24-212J4	RELAY		
	R801	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R802	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R803	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R804	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R805	QRD161J-105	C RESISTOR	1.0M 5% 1/4W	
	R806	QRD161J-224	C RESISTOR	220K 5% 1/4W	
	R807	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R808	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R809	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R810	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R811	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R812	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R813	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R815	QRD161J-331	C RESISTOR	330 5% 1/4W	
	R816	QRD167J-121	C RESISTOR	120 5% 1/4W	
	R817	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R818	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R819	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R820	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R821	QRD161J-472	C RESISTOR	4.7K 5% 1/4W	
	R822	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R823	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R824	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R825	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R826	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R827	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R828	QRD161J-154	C RESISTOR	150K 5% 1/4W	
	R847	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R848	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R856	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R857	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R860	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R861	QRD161J-104	C RESISTOR	100K 5% 1/4W	

BLOCK NO. 03

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R862	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R863	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R864	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R865	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R866	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R867	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R868	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R872	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R874	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R875	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R877	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R878	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R879	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R880	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R881	QRD161J-104	C RESISTOR	100K 5% 1/4W	
	R882	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R883	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R884	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R885	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R886	QRD161J-224	C RESISTOR	220K 5% 1/4W	
	R887	QRD161J-563	C RESISTOR	56K 5% 1/4W	
	R900	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R901	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R910	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R911	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R912	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R913	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R914	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R915	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R916	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R917	QRD161J-201	C.RESISTOR	200 5% 1/4W	
	R951	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R952	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R953	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R954	QRD161J-152	C RESISTOR	1.5K 5% 1/4W	
	R955	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R956	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R957	QRD161J-392	C RESISTOR	3.9K 5% 1/4W	
	R958	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R959	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R960	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R961	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R962	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R963	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R964	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R965	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R966	QRD161J-152	C RESISTOR	1.5K 5% 1/4W	
	R967	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R968	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R969	QRD161J-392	C RESISTOR	3.9K 5% 1/4W	
	R970	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R971	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R972	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R973	QRD161J-152	C RESISTOR	1.5K 5% 1/4W	
	R974	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	

BLOCK NO. 03

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R975	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R976	QRD161J-392	C RESISTOR	3.9K 5% 1/4W	
	R977	QRD167J-562	C RESISTOR	5.6K 5% 1/4W	
	R978	QRD161J-103	C RESISTOR	10K 5% 1/4W	
	R979	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R980	QRD161J-102	C RESISTOR	1.0K 5% 1/4W	
	R981	QRD161J-122	C RESISTOR	1.2K 5% 1/4W	
	R982	QRD161J-152	C RESISTOR	1.5K 5% 1/4W	
	R983	QRD161J-222	C RESISTOR	2.2K 5% 1/4W	
	R984	QRD161J-272	C RESISTOR	2.7K 5% 1/4W	
	R985	QRD161J-392	C RESISTOR	3.9K 5% 1/4W	
	R990	QRD161J-224	C RESISTOR	220K 5% 1/4W	
	R991	QRD161J-333	C RESISTOR	33K 5% 1/4W	
	R992	QRD161J-683	C RESISTOR	68K 5% 1/4W	
	R993	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	S951	QSW0674-001Z	TACT SW		
	S952	QSW0674-001Z	TACT SW		
	S953	QSW0674-001Z	TACT SW		
	S954	QSW0674-001Z	TACT SW		
	S955	QSW0674-001Z	TACT SW		
	S956	QSW0674-001Z	TACT SW		
	S957	QSW0674-001Z	TACT SW		
	S958	QSW0674-001Z	TACT SW		
	S959	QSW0674-001Z	TACT SW		
	S960	QSW0674-001Z	TACT SW		
	S961	QSW0674-001Z	TACT SW		
	S962	QSW0674-001Z	TACT SW		
	S963	QSW0674-001Z	TACT SW		
	S964	QSW0674-001Z	TACT SW		
	S965	QSW0674-001Z	TACT SW		
	S966	QSW0674-001Z	TACT SW		
	S967	QSW0674-001Z	TACT SW		
	S968	QSW0674-001Z	TACT SW		
	S969	QSW0674-001Z	TACT SW		
	S970	QSW0674-001Z	TACT SW		
	S971	QSW0674-001Z	TACT SW		
	S972	QSW0674-001Z	TACT SW		
	S973	QSW0674-001Z	TACT SW		
	S974	QSW0674-001Z	TACT SW		
	S975	QSW0674-001Z	TACT SW		
	S976	QSW0674-001Z	TACT SW		
	S977	QSW0674-001Z	TACT SW		
	S978	QSW0674-001Z	TACT SW		
	S979	QSW0674-001Z	TACT SW		
	S980	QSW0674-001Z	TACT SW		
	S981	QSW0674-001Z	TACT SW		
	X801	QAX0410-001Z	CERA LOCK		
	X802	QAX0401-001	CRYSTAL		
	CN015	EMV5163-011R	CONECTOR		
	CN713	EMV7163-007	CONNECTOR	MAIN AMP	
	CN714	EMV7163-006	CONNECTOR	SURROUND AMP	
	CN801	EMV7123-020R	CONNECTOR		
	CN802	VMC0163-R16	VMC0332-R16		
	CN803	EMV7160-011	CONNECTOR		
	CN804	VMC0261-R12	VMC0332-R12		

BLOCK NO. 03

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C1050	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C1051	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C1052	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	
	C1053	QCXB1CM-222Y	C CAPACITOR	2200PF 20% 16V	
	C1054	QCXB1CM-222Y	C CAPACITOR	2200PF 20% 16V	
	C1055	QFLC1HJ-393ZM	M CAPACITOR	.039MF 5% 50V	
	C1056	QFLC1HJ-393ZM	M CAPACITOR	.039MF 5% 50V	
	C1057	QCFB1HZ-223	C CAPACITOR	.022MF +80:-20% 50V	
	C1058	QCFB1HZ-223	C CAPACITOR	.022MF +80:-20% 50V	
	C1059	QFLC1HJ-393ZM	M CAPACITOR	.039MF 5% 50V	
	D1041	1SS133-T2	DIODE		
	D1042	1SS133-T2	DIODE		
	FL801	QLF0040-001	FL TUBE		
	FW411	EWR37D-10LS	FLAT WIRE		
	FW801	VWSC06-093K3K	EF FLAT WIRE		
	FW802	VWSC06-093K3K	EF FLAT WIRE		
	FW851	EWR34D-25LS	FLAT WIRE	H.PONE WIRE	
	IC801	UPD780206GF-039			
	IC802	NJU3718L	IC		
	IC900	GP1U261X	IR DETECT UNIT		
	JS900	QSW0538-001	ROTARY ENCODER		
⚠	R1051	QRD14CJ-4R7SX	C RESISTOR	4.7 5% 1/4W	
⚠	R1052	QRD14CJ-4R7SX	C RESISTOR	4.7 5% 1/4W	
	SP801	VYH7653-001	IC HOLDER		

■Electric Parts List (CD Servo Control P. C. B.)

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 251	NCS21HJ-100AY	C.CAPA. C.M	X1	
	C 252	NCS21HJ-100AY	C.CAPA. C.M	X2	
	C 253	NCB21HK-104	C CAPACITOR	VDD-VSS	
	C 254	QERF1AM-476Z	E CAPACITOR	VDD-VSS	
	C 281	NCB21HK-223AY	C CAPACITOR	/RST CD LSI	
	C 291	QERF1AM-476Z	E CAPACITOR	+5V-D.GND	
	C 601	NCB21HK-102AY	C CAPACITOR	PU E	
	C 602	NCB21HK-102AY	C CAPACITOR	PU F	
	C 603	NCB21HK-223AY	C CAPACITOR	TBAL	
	C 604	NCB21HK-223AY	C CAPACITOR	FBAL	
	C 605	NCS21HJ-271AY	C CAPACITOR	FE	
	C 606	NCS21HJ-470AY	C.CAPA. C.M	TE	
	C 607	NCB21HK-223AY	C CAPACITOR	TEBPF	
	C 608	NCB21HK-223AY	C CAPACITOR	TEBPF	
	C 609	NCB21HK-102AY	C CAPACITOR	TE	
	C 610	NCB21HK-104	C CAPACITOR	ENV	
	C 611	NCB21HK-104	C CAPACITOR	RF	
	C 612	QER41HM-105	E CAPACITOR	CAGC	
	C 613	NCS21HJ-101AY	C.CAPA. C.M	CENV	
	C 614	NCB21HK-273AY	C CAPACITOR	CEA	
	C 615	NCB21HK-472AY	C CAPACITOR	CSBDO	
	C 616	NCB21HK-103AY	C CAPACITOR	CSBRT	
	C 617	NCS21HJ-331AY	C CAPACITOR	OFT	
	C 621	NCB21HK-104	C CAPACITOR	VREF-D.GND	
	C 623	NCF21CZ-105AY	C CAPACITOR	VCC-D.GND	
	C 624	QER41AM-107	E CAPACITOR	VCC-D.GND	
	C 631	QER41CM-106	E CAPACITOR	APC +5V-BASE	
	C 632	NCF21CZ-105AY	C CAPACITOR	APC +5V-D.GND	
	C 633	NCB21HK-223AY	C CAPACITOR	PU K-VREF	
	C 651	NCS21HJ-120AY	C.CAPA. C.M	X1	
	C 652	NCS21HJ-150AY	C.CAPA. C.M	X2	
	C 653	NCB21HK-104	C CAPACITOR	VDD-VSS	
	C 654	NCB21HK-223AY	C CAPACITOR	AVDD1-AVSS1	
	C 655	QER41AM-227N	E CAPACITOR	AVDD1-AVSS1	
	C 656	NCB21HK-104	C CAPACITOR	D.GND-A.GND	
	C 657	NCB21HK-222AY	C CAPACITOR	OUTL	
	C 658	NCB21HK-222AY	C CAPACITOR	OUTR	
	C 661	NCB21HK-104	C CAPACITOR	AVDD2-AVSS2	
	C 662	QER41AM-107	E CAPACITOR	AVDD2-AVSS2	
	C 663	NCB21HK-104	C CAPACITOR	PLLF	
	C 664	NCB21HK-223AY	C CAPACITOR	IREF	
	C 665	NCB21HK-223AY	C CAPACITOR	DSLF	
	C 666	NCS21HJ-471AY	C CAPACITOR	ARF	
	C 667	NCF21CZ-105AY	C CAPACITOR	VCOF	
	C 668	NCB21HK-473AY	C CAPACITOR	VCOF	
	C 671	NCB21HK-104	C CAPACITOR	DVDD1-DVSS1	
	C 672	QER41AM-107	E CAPACITOR	DVDD1-DVSS1	
	C 801	NCB21HK-103AY	C CAPACITOR	FOD	
	C 802	NCB21HK-103AY	C CAPACITOR	TRD	
	C 811	NCS21HJ-101AY	C.CAPA. C.M	FOCUS	
	C 812	NCS21HJ-101AY	C.CAPA. C.M	SPINDLE	
	C 813	NCS21HJ-101AY	C.CAPA. C.M	FEED	
	C 814	NCS21HJ-101AY	C.CAPA. C.M	TRACKING	
	C 821	NCF21CZ-105AY	C CAPACITOR	VCC-M.GND	
	C 822	QER41AM-227N	E CAPACITOR	VCC-M.GND	

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 851	QER41CM-106	E CAPACITOR	LM VCC-M.GND	
	C 852	QER41CM-106	E CAPACITOR	RM VCC-M.GND	
	C 855	NCB21HK-104	C CAPACITOR	VCC-M.GND	
	C 859	NCF21CZ-105AY	C CAPACITOR	L MOTOR	
	C 860	NCF21CZ-105AY	C CAPACITOR	R MOTOR	
	CN151	EMV7171-115R	15FFC CONNECTOR	VIDEO CD	
	CN152	EMV5109-012B	12P CN RIG	VIDEO CD	
	CN601	EMV7171-115R	15FFC CONNECTOR	TRAVERSE	
	CN651	EMV7171-119R	CONNECTOR	MAIN	
	CN652	EMV7171-105R	CONNECTOR	OSD	
	CN653	EMV7171-113R	CONNECTOR	CD TEXT	
	CN801	VMC0075-006	6P PLUG ASSY	TRAVERSE	
	CN851	VMC0107-R03	SOCKET	DISC DETECTION	
	CN854	QGB2016K1-07	CONNECTOR	TRAY SWITCH	
	CN855	QGG2002M4-10	CONNECTOR	CAM SWITCH	
	IC251	UPD78055GC-A28	IC(MCU)		
	IC601	AN8806SB	IC C.M	RF AMP	
	IC651	MN35510	IC	DSP & DAC	
	IC801	BA6897FP-W	IC	PU DRIVE	
	IC851	TA8409S	IC	L MOTOR DRIVE	
	IC852	TA8409S	IC	R MOTOR DRIVE	
	L 851	VQP0033-100Z	INDUCTOR	VS DE-COUPLE	
	L 853	VQP0033-100Z	INDUCTOR	L MOTOR	
	L 854	VQP0033-100Z	INDUCTOR	R MOTOR	
	Q 291	2SB1357(E,F)	TR.I.M	/P.ON	
	Q 631	2SA1037AKT146	CHIP TR.C.M	APC	
	Q 842	DTA144ES	TR I/M	/DISC	
	R 251	NRSA02J-102NY	RES. C.M	DEMPHO	
	R 252	NRSA02J-102NY	RES. C.M	/OSOFF	
	R 253	NRSA02J-102NY	RES. C.M	MCS	
	R 254	NRSA02J-102NY	RES. C.M	MRDY	
	R 255	NRSA02J-102NY	RES. C.M	KCMND	
	R 256	NRSA02J-102NY	RES. C.M	MSTAT	
	R 257	NRSA02J-102NY	RES. C.M	KCLK	
	R 258	NRSA02J-102NY	RES. C.M	MREQ	
	R 259	NRSA02J-101NY	MG RESISTOR	VCDEMP	
	R 260	NRSA02J-102NY	RES. C.M	SRDATA	
	R 261	NRSA02J-102NY	RES. C.M	SRCLK	
	R 262	NRSA02J-102NY	RES. C.M	MNTO	
	R 263	NRSA02J-102NY	RES. C.M	MNT1	
	R 264	NRSA02J-102NY	RES. C.M	MNT2	
	R 265	NRSA02J-223NY	RES. C.M	/VCDRST PULL-UP	
	R 266	NRSA02J-102NY	RES. C.M	CHECKO	
	R 267	NRSA02J-102NY	RES. C.M	CHECK1	
	R 268	NRSA02J-102NY	RES. C.M	CHECK2	
	R 269	NRSA02J-102NY	RES. C.M	CHECK3	
	R 270	NRSA02J-223NY	RES. C.M	CHECKO PULL-UP	
	R 271	NRSA02J-223NY	RES. C.M	CHECK1 PULL-UP	
	R 272	NRSA02J-223NY	RES. C.M	CHECK2 PULL-UP	
	R 273	NRSA02J-223NY	RES. C.M	CHECK3 PULL-UP	
	R 274	NRSA02J-102NY	RES. C.M	HREQ	
	R 275	NRSA02J-102NY	RES. C.M	HRDY	
	R 276	NRSA02J-102NY	RES. C.M	DABCK	
	R 277	NRSA02J-102NY	RES. C.M	DALRCK	
	R 278	NRSA02J-102NY	RES. C.M	DADATA	

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 279	NRSA02J-102NY	RES. C.M	IOSEL	
	R 281	NRSA02J-102NY	RES. C.M	/RST CD LSI	
	R 282	NRSA02J-102NY	RES. C.M	/VCDRST	
	R 283	NRSA02J-102NY	RES. C.M	/RST OTHER	
	R 284	NRSA02J-102NY	RES. C.M	/RESET MICOM	
	R 285	NRSA02J-102NY	RES. C.M	OSCLK	
	R 286	NRSA02J-102NY	RES. C.M	/OSCS	
	R 287	NRSA02J-102NY	RES. C.M	OSDATA	
	R 288	NRSA02J-102NY	RES. C.M	SHIFT	
	R 289	NRSA02J-223NY	RES. C.M	SHIFT PULL-UP	
	R 291	NRSA02J-122NY	MG RESISTOR	/P.ON	
	R 292	NRSA02J-103NY	RES. C.M	BASE-EMITTER	
	R 293	NRSA02J-102NY	RES. C.M	P.ON	
	R 601	NRSA02J-274NY	MG RESISTOR	TBAL	
	R 602	NRSA02J-154NY	RES. C.M	FBAL	
	R 603	NRSA02J-273NY	MG RESISTOR	FE	
	R 604	NRSA02J-114NYM	RES. C.M	TE	
	R 605	NRSA02J-104NY	MG RESISTOR	TEBPF	
	R 606	NRSA02J-473NY	MG RESISTOR	TEBPF	
	R 607	NRSA02J-822NY	MG RESISTOR	TE	
	R 611	NRSA02J-123NY	RES. C.M	RF	
	R 612	NRSA02J-125NY	MG RESISTOR	CSBRT	
	R 631	NRSA02J-2R2NYM	RES. C.M	+5V DE-COUPLE	
	R 632	NRSA02J-100NY	MG RESISTOR	APC EMITTER	
	R 634	NRSA02J-120NY	MG RESISTOR	APC COLECTOR	
	R 635	NRSA02J-121NY	MG RESISTOR	PU K	
	R 636	NRSA02J-910NY	RES. C.M	PU LD	
	R 651	NRSA02J-271NY	MG RESISTOR	X2	
	R 652	NRSA02J-220NY	MG RESISTOR	AVDD1 DE-COUPLE	
	R 657	NRSA02J-102NY	RES. C.M	OUTL	
	R 658	NRSA02J-102NY	RES. C.M	OUTR	
	R 661	NRSA02J-220NY	MG RESISTOR	AVDD2 DE-COUPLE	
	R 662	NRSA02J-471NY	RES. C.M	PLLF	
	R 663	NRSA02J-124NY	MG RESISTOR	IREF	
	R 665	NRSA02J-683NY	MG RESISTOR	ARF	
	R 666	NRSA02J-155NY	MG RESISTOR	1.5M 5% 1/10W	
	R 667	NRSA02J-562NY	MG RESISTOR	VCOF	
	R 671	NRSA02J-102NY	RES. C.M	CDBCK	
	R 672	NRSA02J-102NY	RES. C.M	CDLRCK	
	R 673	NRSA02J-102NY	RES. C.M	CDDATA	
	R 674	NRSA02J-101NY	MG RESISTOR	TX	
	R 675	NRSA02J-102NY	RES. C.M	MCLK	
	R 676	NRSA02J-102NY	RES. C.M	MDATA	
	R 677	NRSA02J-102NY	RES. C.M	MLD	
	R 678	NRSA02J-102NY	RES. C.M	BLKCK	
	R 679	NRSA02J-102NY	RES. C.M	SQCK	
	R 680	NRSA02J-102NY	RES. C.M	SUBQ	
	R 681	NRSA02J-102NY	RES. C.M	DMUTE	
	R 682	NRSA02J-102NY	RES. C.M	STAT	
	R 683	NRSA02J-102NY	RES. C.M	LDON	
	R 684	NRSA02J-271NY	MG RESISTOR	XCLK	
	R 685	NRSA02J-102NY	RES. C.M	SUBC	
	R 686	NRSA02J-101NY	MG RESISTOR	SBCK	
	R 687	NRSA02J-102NY	RES. C.M	/CLDCK	
	R 688	NRSA02J-101NY	MG RESISTOR	IPFLAG	

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 689	NRSA02J-102NY	RES. C.M	DEMPH	
	R 690	NRSA02J-101NY	MG RESISTOR	DADATA	
	R 691	NRSA02J-101NY	MG RESISTOR	DALRCK	
	R 692	NRSA02J-101NY	MG RESISTOR	DABCK	
	R 693	NRSA02J-471NY	RES. C.M	470 5% 1/10W	
	R 694	NRSA02J-102NY	RES. C.M	XCLK	
	R 801	NRSA02J-182NY	MG RESISTOR	FOD	
	R 802	NRSA02J-472NY	RES. C.M	FOD	
	R 803	NRSA02J-222NY	MG RESISTOR	TRD	
	R 804	NRSA02J-683NY	MG RESISTOR	KICK	
	R 805	NRSA02J-822NY	MG RESISTOR	TVD	
	R 806	NRSA02J-223NY	RES. C.M	TRV	
	R 807	NRSA02J-222NY	MG RESISTOR	ECS	
	R 808	NRSA02J-223NY	RES. C.M	ECM	
	R 811	NRSA02J-473NY	MG RESISTOR	/DRMUTE	
	R 831	NRSA02J-151NY	MG RESISTOR	/REST	
	R 832	NRSA02J-103NY	RES. C.M	/REST PULL-UP	
	R 842	NRSA02J-473NY	MG RESISTOR	/DISC	
	R 851	NRSA02J-102NY	RES. C.M	LMUP	
	R 852	NRSA02J-102NY	RES. C.M	RMUP	
	R 853	NRSA02J-102NY	RES. C.M	LMDOWN	
	R 854	NRSA02J-102NY	RES. C.M	RMDOWN	
	R 855	NRSA02J-102NY	RES. C.M	LM VCC-VREF	
	R 856	NRSA02J-102NY	RES. C.M	RM VCC-VREF	
	R 859	NRSA02J-181NY	MG RESISTOR	VCC DE-COUPLE	
	R 861	NRSA02J-102NY	RES. C.M	1SSW	
	R 862	NRSA02J-102NY	RES. C.M	2SSW	
	R 863	NRSA02J-102NY	RES. C.M	3SSW	
	R 864	NRSA02J-102NY	RES. C.M	1MSW	
	R 865	NRSA02J-102NY	RES. C.M	2MSW	
	R 866	NRSA02J-102NY	RES. C.M	3MSW	
	R 871	NRSA02J-223NY	RES. C.M	1SSW PULL-UP	
	R 872	NRSA02J-223NY	RES. C.M	2SSW PULL-UP	
	R 873	NRSA02J-223NY	RES. C.M	3SSW PULL-UP	
	R 874	NRSA02J-223NY	RES. C.M	1MSW PULL-UP	
	R 875	NRSA02J-223NY	RES. C.M	2MSW PULL-UP	
	R 876	NRSA02J-223NY	RES. C.M	3MSW PULL-UP	
	R 880	NRSA02J-102NY	RES. C.M	CAM0	
	R 881	NRSA02J-102NY	RES. C.M	CAM1	
	R 882	NRSA02J-102NY	RES. C.M	CAM2	
	R 883	NRSA02J-102NY	RES. C.M	CAM3	
	R 884	NRSA02J-102NY	RES. C.M	CAM4	
	R 885	NRSA02J-102NY	RES. C.M	CAM5	
	R 886	NRSA02J-102NY	RES. C.M	CAM6	
	R 887	NRSA02J-102NY	RES. C.M	CAM7	
	R 890	NRSA02J-223NY	RES. C.M	CAM0 PULL-UP	
	R 891	NRSA02J-223NY	RES. C.M	CAM1 PULL-UP	
	R 892	NRSA02J-223NY	RES. C.M	CAM2 PULL-UP	
	R 893	NRSA02J-223NY	RES. C.M	CAM3 PULL-UP	
	R 894	NRSA02J-223NY	RES. C.M	CAM4 PULL-UP	
	R 895	NRSA02J-223NY	RES. C.M	CAM5 PULL-UP	
	R 896	NRSA02J-223NY	RES. C.M	CAM6 PULL-UP	
	R 897	NRSA02J-223NY	RES. C.M	CAM7 PULL-UP	
	W 601	EWF102-047	TER.WIRE	D.GND	
	X 251	QAX0360-001Z	CRYSTAL	FOR IC251	
	X 651	VCX5016-934V	CRYSTAL	FOR IC651	

■Electric Parts List (CD Changer Select Switch P. C. B.)

BLOCK NO. 05

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN804	QGB2016J1-07	CONNECTOR		
	SW 1	QSW0507-001	LEVER SWITCH		
	SW 2	QSW0507-001	LEVER SWITCH		
	SW 3	QSW0507-001	LEVER SWITCH		
	SW 4	QSW0507-001	LEVER SWITCH		
	SW 5	QSW0507-001	LEVER SWITCH		
	SW 6	QSW0507-001	LEVER SWITCH		

■Electric Parts List (Cassette Mechanism Preamp P. C. B.)

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 101	NCS21HJ-561AY	C.CAPA. C.M	560PF 5% 50V	
	C 102	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
	C 103	NCS21HJ-561AY	C.CAPA. C.M	560PF 5% 50V	
	C 104	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
	C 105	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C 106	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 107	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 108	NCB21HK-393AY	C CAPACITOR	.039MF 10% 50V	
	C 109	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
	C 110	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
	C 111	QEK41HM-104	E CAPACITOR	.10MF 20% 50V	
	C 112	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 113	NCB21HK-332AY	C CAPACITOR	3300PF 10% 50V	
	C 114	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 115	NCB21HK-153AY	C CAPACITOR	.015MF 10% 50V	
	C 116	NCB21HK-822AY	C CAPACITOR	8200PF 10% 50V	
	C 117	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
	C 118	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 119	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
	C 120	NCS21HJ-330AY	C CAPACITOR	33PF 5% 50V	
	C 201	NCS21HJ-561AY	C.CAPA. C.M	560PF 5% 50V	
	C 202	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
	C 203	NCS21HJ-561AY	C.CAPA. C.M	560PF 5% 50V	
	C 204	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
	C 205	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C 206	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 207	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 208	NCB21HK-393AY	C CAPACITOR	.039MF 10% 50V	
	C 209	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
	C 210	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
	C 211	QEK41HM-104	E CAPACITOR	.10MF 20% 50V	
	C 212	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 213	NCB21HK-332AY	C CAPACITOR	3300PF 10% 50V	
	C 214	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 215	NCB21HK-153AY	C CAPACITOR	.015MF 10% 50V	
	C 216	NCB21HK-822AY	C CAPACITOR	8200PF 10% 50V	
	C 217	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
	C 218	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 219	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
	C 220	NCS21HJ-330AY	C CAPACITOR	33PF 5% 50V	
	C 301	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 302	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
	C 303	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
	C 304	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 305	NCB21HK-393AY	C CAPACITOR	.039MF 10% 50V	
	C 306	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C 308	NCB21HK-562AY	C CAPACITOR	5600PF 10% 50V	
	C 309	NCB21HK-562AY	C CAPACITOR	5600PF 10% 50V	
	C 310	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
	C 311	NCB21HK-682AY	C.CAPA. C.M	6800PF 10% 50V	
	C 313	QEKF1AM-107ZN	E CAPACITOR	100MF 20% 10V	
	C 314	QCZ0205-155	ML C CAP I/M	1.5MF	
	C 315	QCZ0205-155	ML C CAP I/M	1.5MF	
	C 316	QFG32AJ-103ZN	PP CAPACITOR	.010MF 5% 100V	
	C 318	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 319	QFG32AJ-821ZN	TF CAPACITOR	820PF 5% 100V	
	C 321	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 322	QFG32AJ-152ZN	M CAPACITOR	1500PF 5% 100V	
	C 327	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
	C 328	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 329	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 330	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 332	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 335	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 336	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 337	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 338	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 339	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
	C 340	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 341	QEKF1AM-107ZN	E CAPACITOR	100MF 20% 10V	
	C 342	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 343	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 344	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
	C 345	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
	CN301	VMC0163-R06	CONNECTOR		
	CN302	VMC0163-R06	CONNECTOR		
	CN303	QGB2011M1-10	PWB CONECTOR		
	CN304	QGB2011M1-10	PWB CONECTOR		
	CN305	VMC0163-R10	CONNECTOR		
	CN306	VMC0163-R11	CONNECTOR		
	D 301	MA704A	S.K.DIODE		
	D 302	HSM2838C	DIODE		
	D 307	HZM5.1NB2-X	CHIP Z DIODE CM		
	D 308	HZM5.1NB2-X	CHIP Z DIODE CM		
	D 309	MA704A	S.K.DIODE		
	IC301	BA3126N	IC		
	IC302	AN7345K	IC		
	IC303	BU4094BCF-X	IC		
	IC304	BU4094BCF-X	IC		
	L 301	QQR0620-001	OSC COIL(BIAS)		
	L 303	VQP0033-100Z	INDUCTOR		
	Q 101	DTC114TKT146	TRANSISTOR		
	Q 102	DTC144TKA-X	TRANSISTOR		
	Q 103	DTC144EKA-X	TRANSISTOR		
	Q 104	DTC114TKT146	TRANSISTOR		
	Q 105	2SC2001(L,K)	TRANSISTOR		
	Q 201	DTC114TKT146	TRANSISTOR		
	Q 202	DTC144TKA-X	TRANSISTOR		
	Q 203	DTC144EKA-X	TRANSISTOR		
	Q 204	DTC114TKT146	TRANSISTOR		
	Q 205	2SC2001(L,K)	TRANSISTOR		
	Q 301	DTC144TKA-X	TRANSISTOR		
	Q 302	2SC2001(L,K)	TR I/M		
	Q 303	2SC2001(L,K)	TR I/M		
	Q 304	2SC2001(L,K)	TRANSISTOR		
	Q 305	2SC2001(L,K)	TRANSISTOR		
	Q 306	2SC1623(6)	TRANSISTOR		
	Q 307	2SC1623(6)	TRANSISTOR		
	Q 308	2SC1623(6)	TRANSISTOR		
	Q 309	2SC1623(6)	TRANSISTOR		

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q 312	2SB562(C)	TRANSISTOR		
	Q 313	2SC1623(6)	TRANSISTOR		
	Q 314	2SB562(C)	TRANSISTOR		
	Q 315	2SC1623(6)	TRANSISTOR		
	Q 316	2SA952(L,K)	TRANSISTOR		
	Q 317	DTC124EK	TRANSISTOR		
	Q 318	DTA144EKA-X	TRANSISTOR		
	Q 319	DTC144EKA-X	TRANSISTOR		
	Q 320	DTC144EKA-X	TRANSISTOR		
	Q 321	DTC144EKA-X	TRANSISTOR		
	Q 322	DTC144EKA-X	TRANSISTOR		
	Q 323	2SC1623(6)	TRANSISTOR		
	R 102	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 103	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
	R 105	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W	
	R 106	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 107	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
	R 108	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 109	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 110	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 111	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
	R 112	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
	R 113	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W	
	R 114	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 115	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 116	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W	
	R 117	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 118	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 119	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W	
	R 120	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 121	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
	R 202	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 203	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
	R 205	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W	
	R 206	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 207	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
	R 208	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 209	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 210	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 211	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
	R 212	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
	R 213	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W	
	R 214	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 215	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 216	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W	
	R 217	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 218	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 219	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W	
	R 220	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 221	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
	R 301	NRS181J-221NY	MG RESISTOR	220 5% 1/8W	
	R 302	NRS181J-101NY	MG RESISTOR	100 5% 1/8W	
	R 304	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 305	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 306	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 307	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 308	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 309	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 310	NRS181J-820NY	MG RESISTOR	82 5% 1/8W	
	R 311	NRS181J-820NY	MG RESISTOR	82 5% 1/8W	
	R 313	NRSA02J-3R3NYM	RES. C.M	3.3 5% 1/10W	
	R 314	NRSA02J-223NY	RES. C.M	22K 5% 1/10W	
	R 315	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
	R 316	NRSA02J-223NY	RES. C.M	22K 5% 1/10W	
	R 317	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
	R 318	NRSA02J-123NY	RES. C.M	12K 5% 1/10W	
	R 319	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 321	NRSA02J-123NY	RES. C.M	12K 5% 1/10W	
	R 322	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 327	NRSA02J-474NY	MG RESISTOR	470K 5% 1/10W	
	R 328	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 329	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 330	NRSA02J-0RONY	RES. C.M	5% 1/10W	
	R 335	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 336	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 338	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 339	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 341	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 343	NRSA02J-0RONY	RES. C.M	5% 1/10W	
	R 345	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 346	NRSA02J-0RONY	RES. C.M	5% 1/10W	
	R 347	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 348	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 350	NRSA02J-472NY	RES. C.M	4.7K 5% 1/10W	
	R 351	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W	
	R 353	NRSA02J-472NY	RES. C.M	4.7K 5% 1/10W	
	R 354	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W	
	R 355	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 356	NRSA02J-103NY	RES. C.M	10K 5% 1/10W	
	R 357	NRSA02J-103NY	RES. C.M	10K 5% 1/10W	
	R 358	NRSA02J-123NY	RES. C.M	12K 5% 1/10W	
	R 359	NRSA02J-123NY	RES. C.M	12K 5% 1/10W	
	R 360	NRSA02J-433NYT	RES. C.M **	43K 5% 1/10W	
	R 361	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
	R 362	NRSA02J-123NY	RES. C.M	12K 5% 1/10W	
	R 363	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
	R 364	NRSA02J-433NYT	RES. C.M **	43K 5% 1/10W	
	R 365	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W	
	R 366	NRSA02J-123NY	RES. C.M	12K 5% 1/10W	
	R 367	NRSA02J-102NY	RES. C.M	1.0K 5% 1/10W	
	R 368	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 369	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 371	NRS181J-222NY	MG RESISTOR	2.2K 5% 1/8W	
	R 374	NRSA02J-912NY	RES. C.M	9.1K 5% 1/10W	
	R 375	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
	R 376	NRS181J-6R8NY	MG RESISTOR	6.8 5% 1/8W	
	VR101	QVPA603-503A	SEMI V RESISTOR		
	VR201	QVPA603-503A	SEMI V RESISTOR		
	VR301	QVPA603-103M	SEMI V RESISTOR		
	WIRE	VWS304-10A13K	FLAT WIRE		

■Electric Parts List (Cassette Mechanism Switch P. C. B.)

BLOCK NO. 07

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN 1	EMV7159-010	10P PLUG ASSY		
	D 1	1SR139-100	SI DIODE		
	IC 1	SG-105F3-BB/C	PHOTO SENSER		
	P 1	VMZ0015-002	POST PIN		
	SW 2	MXS00220MVL0	CASSETTE SWITCH	TAPE	
	SW 4	MXS00220MVL0	CASSETTE SWITCH	70U	
	SW 6	QSW0507-001	SWITCH		

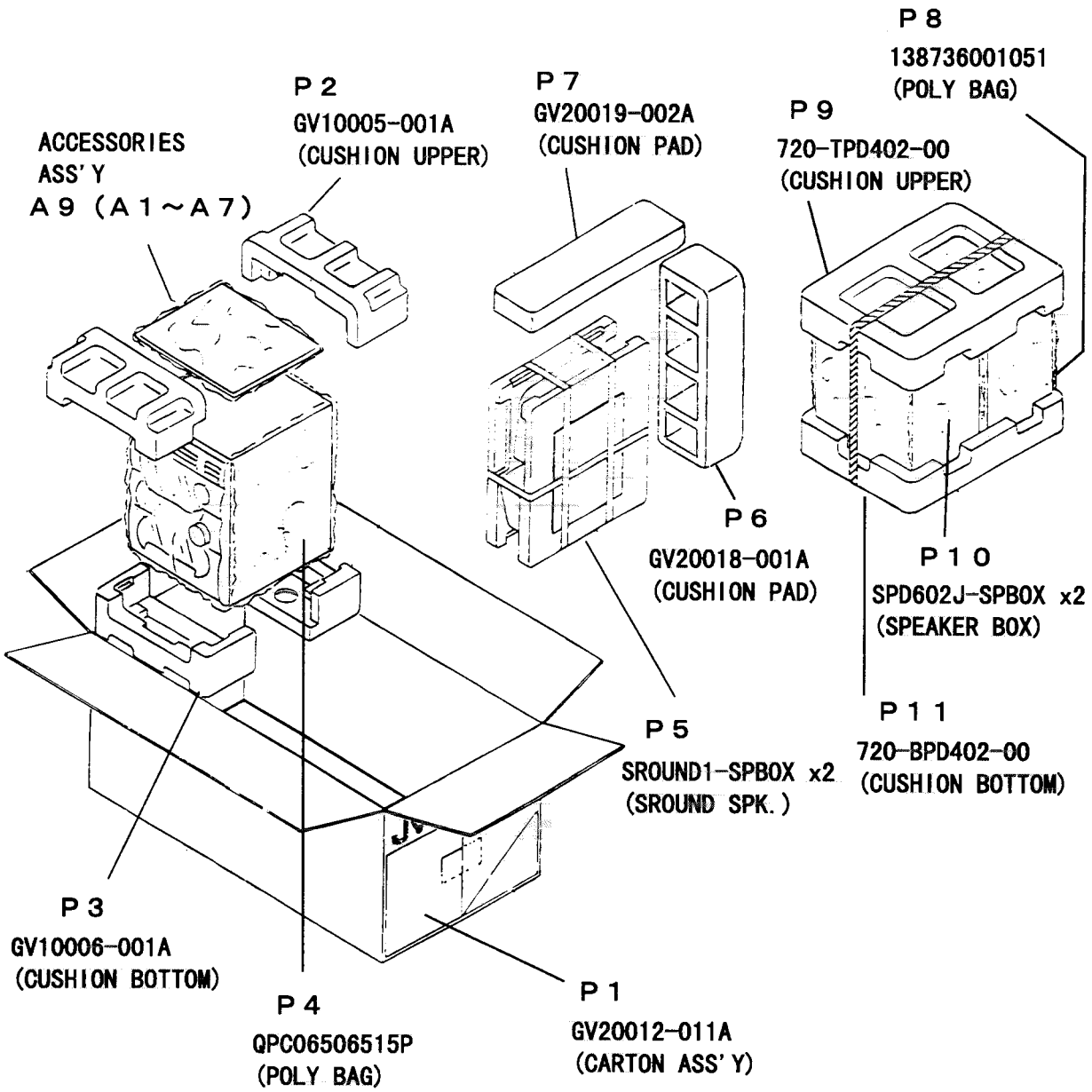
■Electric Parts List (Cassette Mechanism Switch P. C. B.)

BLOCK NO. 08

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN 1	EMV7159-010	10P PLUG ASSY		
	D 1	1SR139-100	SI DIODE		
	IC 1	SG-105F3-BB/C	PHOTO SENSER		
	P 1	VMZ0015-002	POST PIN		
	SW 1	MXS00220MVL0	CASSETTE SWITCH	R.REC	
	SW 2	MXS00220MVL0	CASSETTE SWITCH	TAPE	
	SW 4	MXS00220MVL0	CASSETTE SWITCH	70U	
	SW 5	MXS00220MVL0	CASSETTE SWITCH	F.REC	
	SW 6	QSW0507-001	SWITCH		

Accessories and Packing Materials and Parts List

Block No. M5MM & M6MM



■ Accessories Parts List

BLOCK NO. M6MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	QAL0014-001	AM LOOP ANT		1		
	A 2	GVT0004-001A	INST.BOOK		1	J	
		GVT0004-002A	INST.BOOK		1	C	
	A 3	EWP201-011	B. IN ANT		1		
	A 4	RM-SED602TUKP	REMOCON		1		
	A 5	R6SPTT/2STS	BATTERY		2		
	A 6	BT-51006-1	REGIST CARD		1	J	
		BT-52002-1	WARRANTY CARD		1	C	
	A 7	BT-20044G	SAFETY INST.		1		
		BT-20071B	SVC CENTER LIST		1	C	
	A 9	E309758-002	POLY BAG		1		

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO DIVISION,10-1,Chome,Ohwatari-machi,maebashi-city,Japan

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